

BASE-LINE

2nd Half, 1989



**CONTINUOUS BASE-LINE STUDY (MODIFIED)
(MILL LINERBOARD DATA FOR
JUL-AUG, SEP-OCT, NOV-DEC, 1989)**

Project 2694-1

Report One-Hundred Six

**A Progress Report
to
THE CONTAINERBOARD AND KRAFT PAPER GROUP
OF THE
AMERICAN PAPER INSTITUTE**

March 1, 1990

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BASE-LINE
2nd HALF, 1989

THE INSTITUTE OF PAPER SCIENCE AND TECHNOLOGY

Atlanta, Georgia

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THE INSTITUTE OF PAPER SCIENCE AND TECHNOLOGY
Atlanta, Georgia

CONTINUOUS BASE-LINE STUDY (MODIFIED)
(MILL LINERBOARD DATA FOR JUL-AUG, SEP-OCT, NOV-DEC, 1989)

SUMMARY

PART I: SUMMARY OF MOISTURE CONTENT DATA
(JUL-DEC, 1989)

MOISTURE CONTENT, %				
Linerboard Grade Wt.		JUL-AUG	SEP-OCT	NOV-DEC
26 Lb.	Max.	7.0	6.8	6.9
	Min.	4.6	4.6	3.6
	Ave.	5.6(11)	5.5(14)	5.5(16)
33 Lb.	Max.	7.1	6.7	7.0
	Min.	4.1	4.2	4.2
	Ave.	5.8(22)	5.6(22)	5.7(25)
38 Lb.	Max.	7.0	7.0	6.8
	Min.	5.5	5.5	5.4
	Ave.	6.0(14)	6.0(14)	6.0(14)
42 Lb.	Max.	7.1	7.0	6.9
	Min.	4.8	5.1	4.3
	Ave.	6.0(34)	6.0(33)	5.9(36)
69 Lb.	Max.	7.6	7.6	7.4
	Min.	5.6	5.5	5.5
	Ave.	6.4(23)	6.5(22)	6.4(23)
90 Lb.	Max.	8.2	8.5	7.4
	Min.	5.8	5.6	5.8
	Ave.	6.6(13)	6.6(13)	6.5(14)

Max. and Min. values are current machine averages.

Ave. is current F.K.B.G. average, number of machines is indicated in parentheses.

Part II: SUMMARY OF ADJUSTED BASIS WEIGHT, DATA
(JUL-DEC, 1989)

ADJUSTED BASIS WEIGHT, Lb/M sq ft

Linerboard Grade Wt.		JUL-AUG	SEP-OCT	NOV-DEC
26 Lb.	Max.	26.8	26.8	27.3
	Min.	25.4	25.9	25.7
	Ave.	26.1 (13)	26.3 (16)	26.3 (18)
33 Lb.	Max.	34.1	34.6	34.5
	Min.	32.4	32.6	32.5
	Ave.	33.3 (25)	33.4 (25)	33.3 (29)
38 Lb.	Max.	39.2	42.1	39.1
	Min.	38.1	37.8	37.5
	Ave.	38.5 (16)	38.6 (17)	38.3 (16)
42 Lb.	Max.	43.3	43.2	43.2
	Min.	41.4	41.3	41.2
	Ave.	42.3 (38)	42.3 (38)	42.3 (40)
69 Lb.	Max.	70.9	70.9	70.9
	Min.	67.3	67.0	67.4
	Ave.	69.4 (26)	69.3 (26)	69.3 (26)
90 Lb.	Max.	92.2	91.9	91.9
	Min.	62.3	62.4	62.5
	Ave.	88.1 (13)	88.2 (14)	88.6 (14)

Max. and Min. values are current machine averages.

Ave. is current F.K.B.G. average, number of machines is indicated in parentheses.

Part III: SUMMARY OF CALIPER, DATA
(JUL-DEC, 1989)

CALIPER, Mil

Linerboard Grade Wt.		JUL-AUG	SEP-OCT	NOV-DEC
26 Lb.	Max.	8.5	8.5	8.6
	Min.	6.9	6.6	6.6
	Ave.	7.6(13)	7.6(15)	7.6(18)
33 Lb.	Max.	11.2	11.0	10.9
	Min.	8.7	8.8	8.4
	Ave.	9.7(25)	9.6(25)	9.6(29)
38 Lb.	Max.	11.3	11.9	12.0
	Min.	9.9	8.1	10.0
	Ave.	10.8(16)	10.7(17)	10.8(16)
42 Lb.	Max.	13.0	16.3	12.9
	Min.	10.8	10.7	10.2
	Ave.	11.8(38)	11.9(38)	11.7(40)
69 Lb.	Max.	20.2	20.4	20.4
	Min.	14.1	17.2	16.7
	Ave.	18.9(26)	19.0(26)	18.9(26)
90 Lb.	Max.	25.5	26.0	26.2
	Min.	17.0	18.0	17.5
	Ave.	23.8(13)	24.0(14)	23.8(14)

Max. and Min. values are current machine averages.

Ave. is current F.K.B.G. average, number of machines is indicated in parentheses.

Part IV: SUMMARY OF BURSTING STRENGTH, DATA
(JUL-DEC, 1989)

BURSTING STRENGTH, psig

Linerboard Grade Wt.		JUL-AUG	SEP-OCT	NOV-DEC
26 Lb.	Max.	85.0	87.0	83.0
	Min.	66.0	66.0	66.0
	Ave.	73.2 (13)	73.2 (16)	74.2 (17)
33 Lb.	Max.	103.0	103.0	96.0
	Min.	80.0	80.0	81.0
	Ave.	87.7 (25)	88.9 (25)	87.9 (28)
38 Lb.	Max.	106.0	113.0	118.0
	Min.	90.0	91.0	93.0
	Ave.	97.1 (16)	100.9 (17)	99.7 (15)
42 Lb.	Max.	120.0	125.0	139.0
	Min.	100.0	99.0	99.0
	Ave.	106.9 (38)	107.2 (38)	107.4 (39)
69 Lb.	Max.	174.0	178.0	164.0
	Min.	128.0	127.0	129.0
	Ave.	147.4 (26)	148.1 (26)	145.8 (25)
90 Lb.	Max.	212.0	208.0	202.0
	Min.	19.0	123.0	127.0
	Ave.	163.4 (13)	176.7 (14)	177.9 (14)

Max. and Min. values are current machine averages.

Ave. is current F.K.B.G. average, number of machines is indicated in parentheses.

Part V: SUMMARY OF CD RING CRUSH, DATA
(JUL-DEC, 1989)

CD RING CRUSH, 1b

Linerboard Grade Wt.		JUL-AUG	SEP-OCT	NOV-DEC
26 Lb.	Max.	46.0	52.0	49.1
	Min.	33.0	29.0	28.5
	Ave.	38.0 (7)	40.7 (10)	41.2 (10)
33 Lb.	Max.	72.0	80.0	72.0
	Min.	46.0	46.0	46.0
	Ave.	58.1 (13)	58.6 (15)	57.6 (17)
38 Lb.	Max.	80.8	89.0	89.0
	Min.	55.0	58.0	57.0
	Ave.	70.0 (13)	73.8 (13)	69.8 (10)
42 Lb.	Max.	101.0	94.0	118.0
	Min.	62.0	66.0	67.0
	Ave.	79.5 (20)	79.6 (22)	81.8 (23)
69 Lb.	Max.	151.0	147.0	147.0
	Min.	107.0	112.0	106.0
	Ave.	126.0 (14)	128.2 (15)	128.8 (17)
90 Lb.	Max.	189.0	188.0	193.0
	Min.	149.0	139.0	144.0
	Ave.	167.1 (7)	159.0 (6)	168.3 (6)

Max. and Min. values are current machine averages.

Ave. is current F.K.B.G. average, number of machines is indicated in parentheses.

Part VI: SUMMARY OF CD STFI, DATA
(JUL-DEC, 1989)

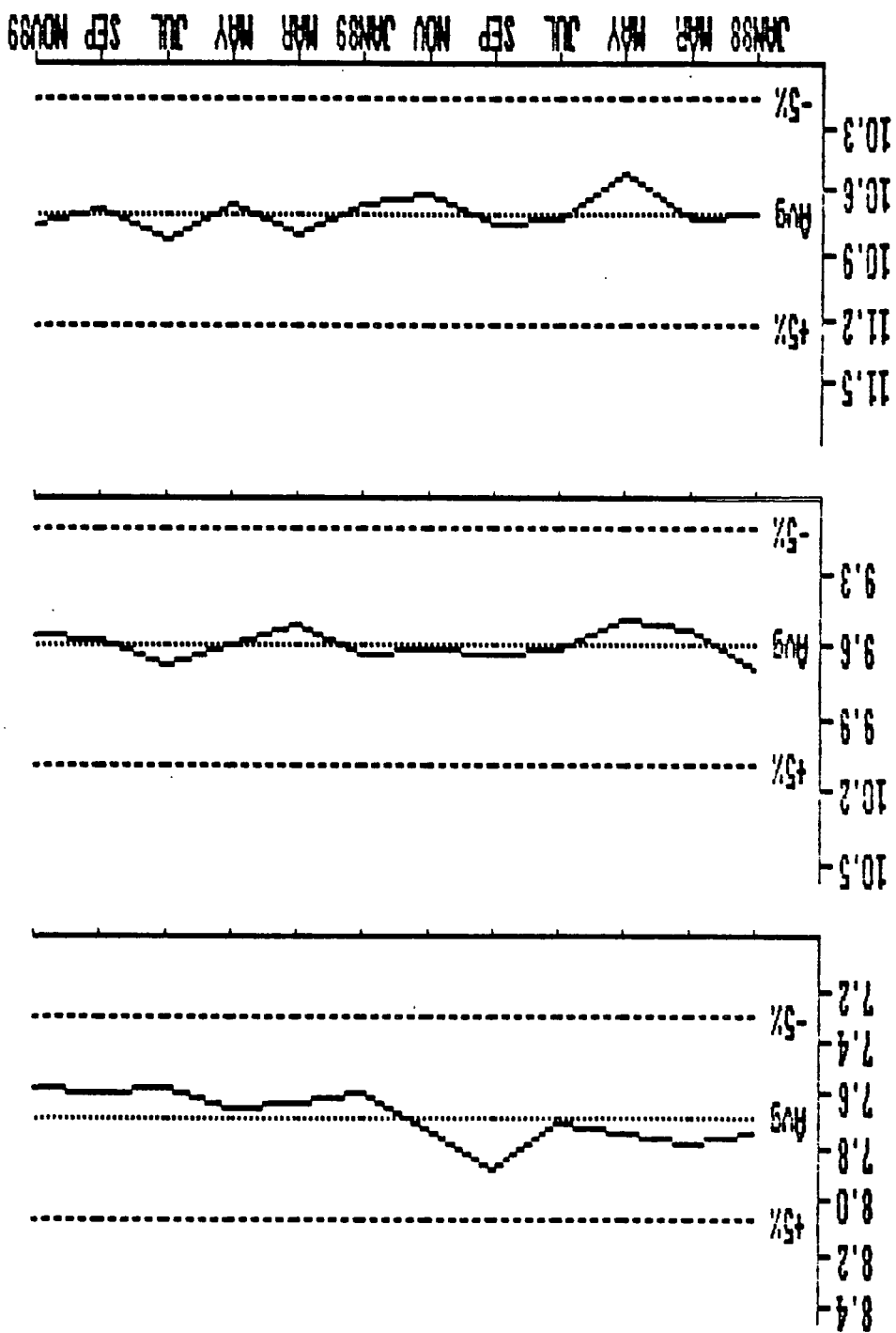
CD STFI, lb/in

Linerboard Grade Wt.		JUL-AUG	SEP-OCT	NOV-DEC
26 Lb.	Max.	15.5	14.0	15.0
	Min.	10.8	10.9	11.9
	Ave.	13.4(6)	12.8(7)	12.9(7)
33 Lb.	Max.	19.0	18.0	20.5
	Min.	12.4	14.5	13.8
	Ave.	16.2(14)	16.1(12)	16.8(11)
38 Lb.	Max.	20.0	26.6	22.8
	Min.	17.1	17.8	18.2
	Ave.	18.7(7)	20.0(7)	19.8(6)
42 Lb.	Max.	23.0	25.3	24.2
	Min.	17.8	18.0	18.9
	Ave.	20.2(20)	21.0(16)	21.0(15)
69 Lb.	Max.	34.7	35.0	35.9
	Min.	28.4	28.6	28.3
	Ave.	31.7(12)	32.1(11)	32.5(9)
90 Lb.	Max.	47.0	46.4	45.0
	Min.	29.0	26.3	28.9
	Ave.	41.0(7)	40.8(7)	39.8(6)

Max. and Min. values are current machine averages.

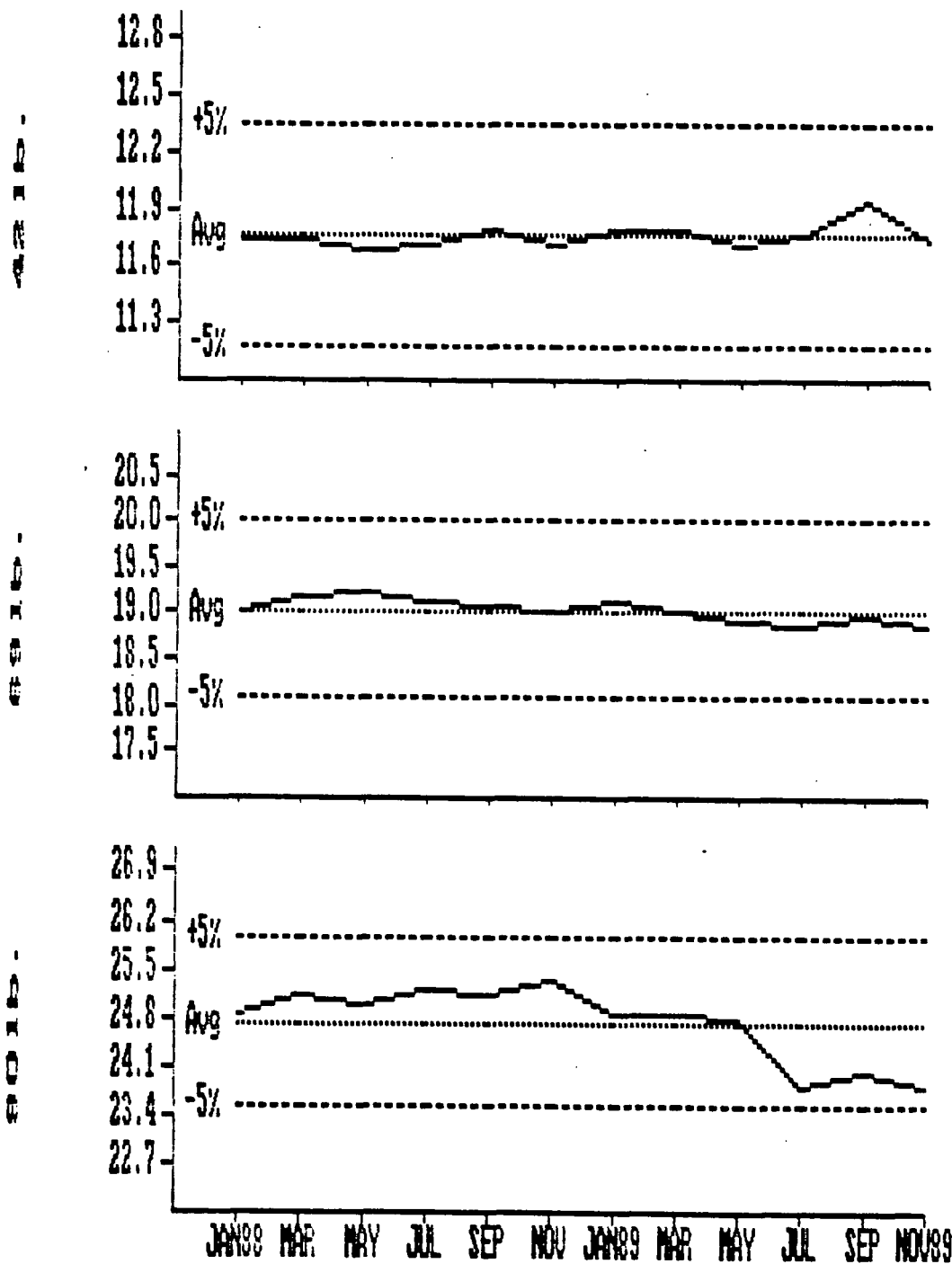
Ave. is current F.K.B.G. average, number of machines is indicated in parentheses.

TWO YEAR TREND PLOT FOR CALIBER, M15



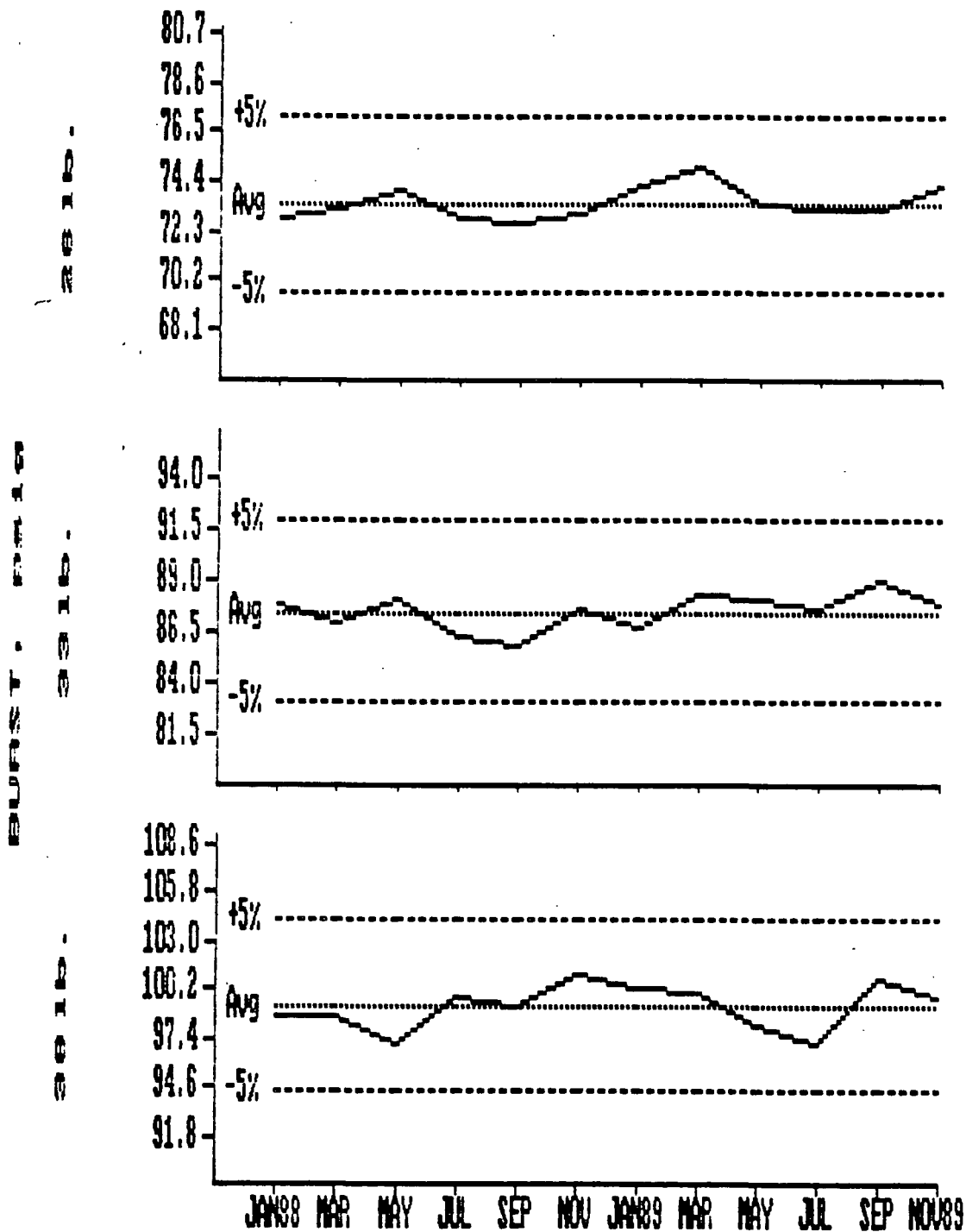
LINEBOARD B1-MONTHLY AVERAGES

TWO YEAR TREND PLOT FOR CALIPER, mils



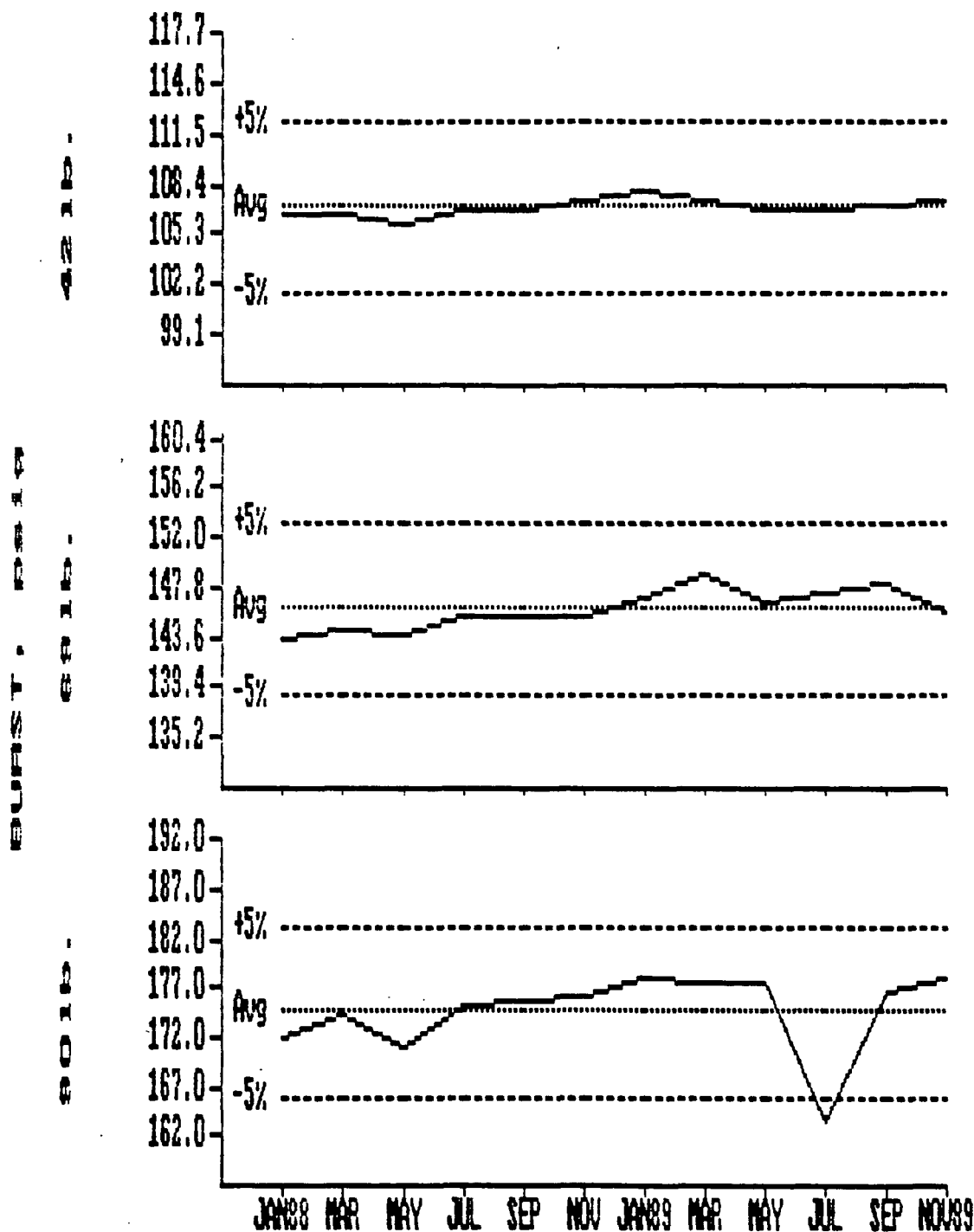
LINERBOARD BI-MONTHLY AVERAGES

TWO YEAR TREND PLOT FOR BURST, psig



LINERBOARD BI-MONTHLY AVERAGES

TWO YEAR TREND PLOT FOR BURST, psig



LINEBOARD BI-MONTHLY AVERAGES

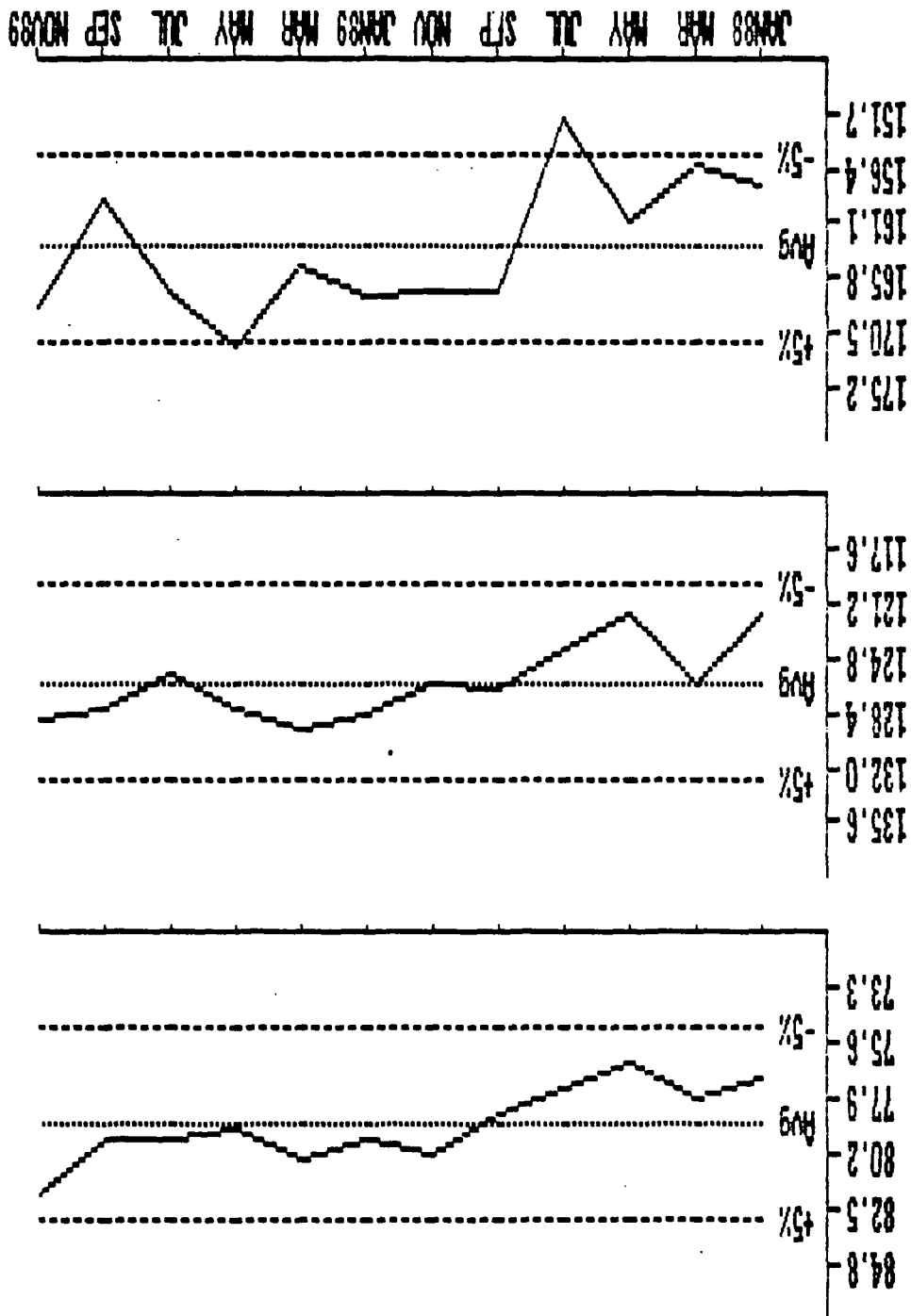
The figure consists of three vertically stacked line graphs, each representing a different category. The x-axis for all graphs is time, spanning from March 1989 to March 1990, with labels for MAR, MAY, JUL, SEP, NOV, and JAN. The y-axis represents percentage variation, with a central dotted line for the average (AVG) and dashed lines for the +/- 5% range.

- Top Graph:** The y-axis scale ranges from 65.0 to 75.0. The average (AVG) is approximately 69.0. The data line starts at 69.0 in March 1989, drops to a low of about 67.0 in May 1989, rises to a peak of about 70.0 in July 1989, and then fluctuates between 68.0 and 70.0 until March 1990.
- Middle Graph:** The y-axis scale ranges from 52.6 to 62.2. The average (AVG) is approximately 57.4. The data line starts at 57.4 in March 1989, dips to about 56.0 in May 1989, rises to a peak of about 58.0 in July 1989, and then fluctuates between 57.0 and 58.0 until March 1990.
- Bottom Graph:** The y-axis scale ranges from 36.1 to 42.7. The average (AVG) is approximately 39.4. The data line starts at 39.4 in March 1989, rises to a peak of about 41.0 in May 1989, drops to a low of about 38.0 in July 1989, rises to a peak of about 40.0 in September 1989, and then fluctuates between 39.0 and 40.0 until March 1990.

C. O. WHITE CEMENT. REF.
981B. 981B.

LINEBOARD BI-MONTHLY AVERAGES

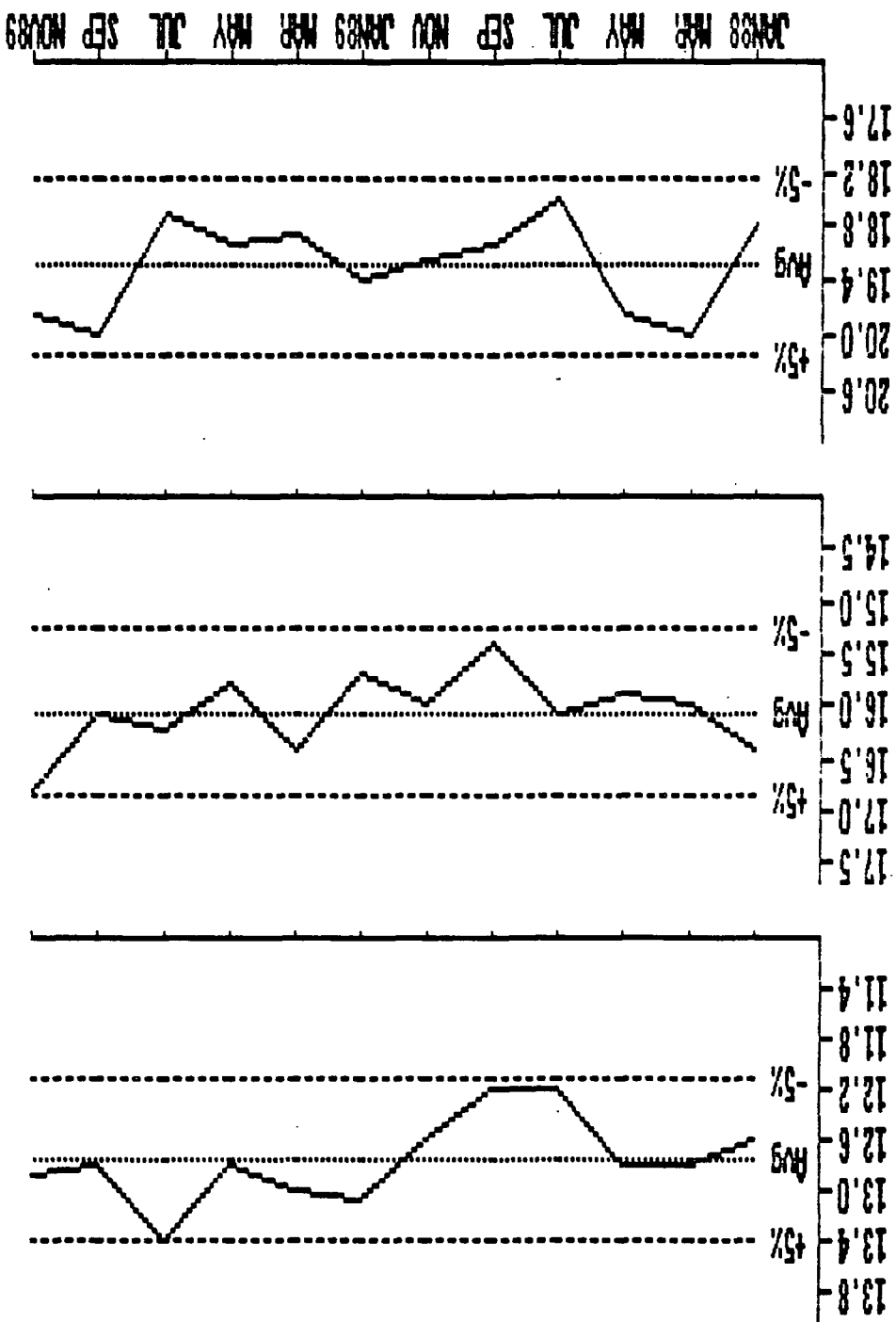
TWO YEAR TREND PLOT FOR C.D. RING CRUSH, lbs.



0.0 - RING CRUSH - 0.2 - RING CRUSH - 0.4 - RING CRUSH

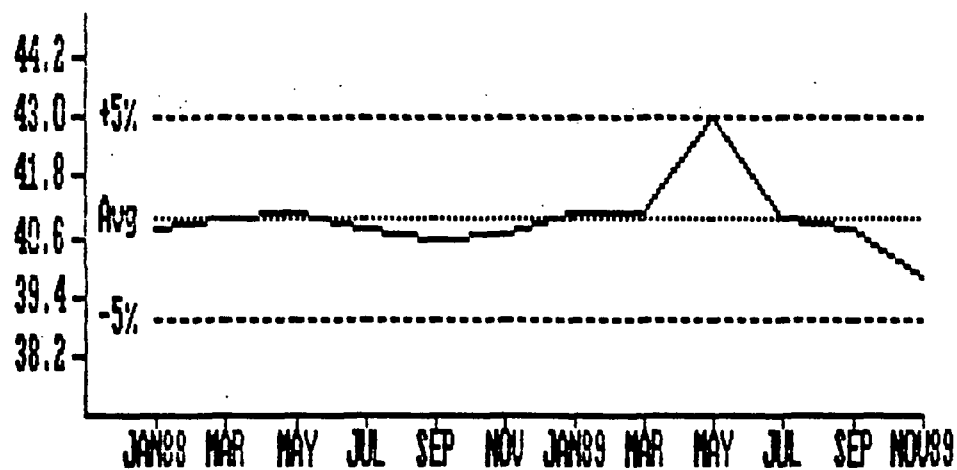
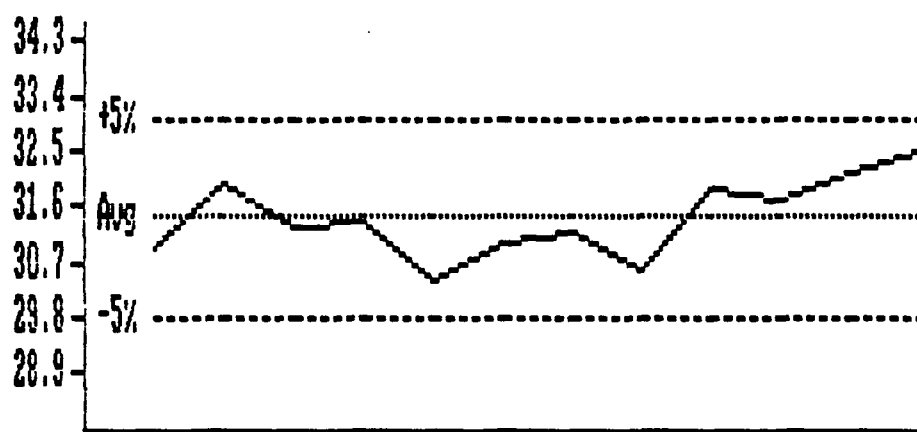
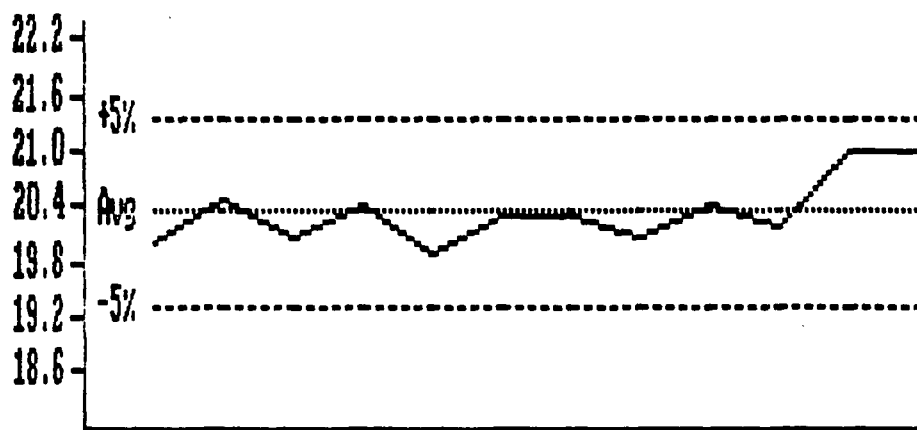
LINERBOARD BI-MONTHLY AVERAGES

TWO YEAR TREND PLOT FOR C.D. STFI, lbs/in



C.D. STFI, lbs/in
 5%
 5%
 5%

LINEBOARD BI-MONTHLY AVERAGES



LINERBOARD BI-MONTHLY AVERAGES

INTRODUCTION

The continuous base-line study (modified) is a compilation of bimonthly averages of mill test data obtained routinely on six major grade weights of linerboard manufactured in the member mills of C.K.P.G. Mill data are included for moisture content, basis weight, caliper, bursting strength, C.D. ring crush, and C.D. STFI tests made on the production of individual machines which produced at least 500 tons of one or more of the following six major grade weights during a given period: 26, 33, 38, 42, 69, and 90 lb. Participating mills are asked to report reel moisture content, basis weight, and moisture content corresponding to the basis weight measurement. The latter two measurements are used to compute the adjusted basis weight corresponding to a moisture content of 7.8%. Only the reel moisture content and the adjusted basis weight are included in the report.

PRESENTATION OF DATA

For the six major grade weights of linerboard referred to earlier, mill test averages for moisture content, adjusted basis weight, caliper, bursting strength, C.D. ring crush, and C.D. STFI are compiled in the following tables:

Table Number	Description
I-III	Mill Test Averages on 26-lb Linerboard
IV-VI	Mill Test Averages on 33-lb Linerboard
VII-IX	Mill Test averages on 38-lb Linerboard
X-XII	Mill Test Averages on 42-lb Linerboard
XIII-XV	Mill Test Averages on 69-lb Linerboard
XVI-XVIII	Mill Test Averages on 90-lb Linerboard

Data submitted by the participating mills relative to conditioning and testing environments are summarized in Table XIX. The procedures used to calculate adjusted basis weight, cumulative averages, and indexes are described in the Appendix.

It should be explained that the number of machines for which data are compiled in each table for a specified period varies for these reasons: A machine must have (a) produced at least 500 tons of the pertinent grade weight during the specified period, or (b) produced 500 tons of the pertinent grade weight during ANY ONE OR MORE of the 12 months prior to the specified period (so that a cumulative average is available), to be included in a given table.

Table I

Averages of Mill Quality Data for JUL-AUG, 1989 - 26 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt.		Ind. #B		Caliper		Ind. #B
	Cur. Av.	Cum. Av.	Cur. Av.	Cum. Av.	Cur. Av.	Cum. Av.	Cur. Av.	Cum. Av.	
E1		5.0		26.6				7.3	
I1	5.0	4.9	26.1	26.1			7.3	7.6	95.1
M1	6.6	6.3	26.1	26.1			7.8	7.2	101.6
R1	7.0	6.9	26.1	26.1			8.5	8.4	110.7
V1		5.4		27.0				7.5	
W1		5.5		25.8				7.2	89.9
D2	5.6	6.0	26.8	26.4			6.9	7.6	96.4
I2		5.9		26.4				6.9	
J2	5.4	5.3	26.1	26.1			8.1	8.0	105.5
K2	5.8	5.5	26.3	26.2			7.8	7.7	101.6
N2		5.7		27.6				8.0	
Q2		4.9		26.1				7.9	
X2	4.6	4.2	26.4	26.4			7.6	8.2	99.0
F3	6.6	6.7	26.1	26.0			7.6	7.8	99.0
V3	4.9	5.2	26.3	26.3			7.1	7.2	92.5
Y3		4.8		26.3				7.5	95.1
J4	5.6	5.6	26.0	25.6			8.0	8.1	104.2
M4		5.0		26.5			7.0	7.5	91.2
Y4		3.6		26.4				8.5	
FKBG	5.6	5.4	26.1	26.3			7.6	7.7	98.6

Notes A and B are given in the appendix.

Table I (Cont)

Averages of Mill Quality Data for JUL-AUG, 1989 - 26 LB Kraft Linerboard

Code	Burst PSIG			CD Ring Crush			CD STFI Lb/In.		
	Cur. Av.	Cum. Av.	Ind. *B	Cur. Av.	Lb. Cum. Av.	Ind. *B	Cur. Av.	Cum. Av.	Ind. *B
E1		69.3			29.5			12.5	
I1	70.0	69.2	95.1	33.0	35.5	82.9	12.7	12.3	99.8
M1	71.0	70.3	96.4				13.6	12.1	106.8
R1	70.0	70.8	95.1				12.9	12.8	101.3
V1		84.8			52.1				
W1	77.0	75.5	104.6						
D2	80.0	77.2	108.7	46.0	39.3	115.5	15.5	13.8	121.8
I2		72.0						15.0	
J2	73.0	79.7	99.2	37.0	41.0	92.9			
K2	77.0	73.5	104.6	34.0	35.3	85.4			
N2		76.7			49.9			12.6	
Q2		68.5			32.5				
X2	73.0	70.0	99.2						
F3	69.0	69.3	93.7				10.8	10.2	84.8
V3	66.0	66.0	89.7	39.0	41.7	97.9			
Y3	70.0	71.8	95.1	44.0	44.1	110.5	15.0	14.3	117.8
J4	70.0	70.2	95.1	33.0	36.2	82.9			
M4	85.0	86.7	115.5					10.8	
Y4		75.3							
FKBG	73.2	73.6	99.4	38.0	39.8	95.4	13.4	12.7	105.4

Note B is given in the appendix.

Table II

Averages of Mill Quality Data for SEP-OCT, 1989 - 26 LB Kraft Linerboard

Code	Moisture Content			Adj. Basis Wt. #A			Caliper		
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Cum. Av.	Ind. #B
E1	5.0	5.0	92.3	26.3	26.7	100.0	6.9	7.3	90.0
I1	5.0	4.9	92.3	26.1	26.1	99.2	7.3	7.5	95.2
M1	6.2	6.3	114.5	26.1	26.1	99.2	6.6	7.5	86.1
R1	6.8	6.9	125.5	26.1	26.1	99.2	8.5	8.4	110.9
V1	6.0	5.4	110.8	26.8	27.0	102.0	7.7	7.5	100.5
W1	5.6	5.5	103.4	26.2	25.7	99.7	7.1	7.2	92.6
D2		6.0		26.8	26.5	102.0	7.5	7.5	97.9
I2		5.9			26.4			6.9	
J2	5.3	5.3	97.8	26.1	26.1	99.2	8.1	8.0	105.7
K2	5.9	5.6	108.9	26.3	26.2	100.2	7.7	7.7	100.5
N2	5.2	5.7	96.0	26.8	27.6	102.1		8.0	
Q2		4.9			26.1			7.9	
X2	4.7	4.3	86.8	26.4	26.4	100.3	8.2	8.0	107.0
F3	6.4	6.6	118.1	26.1	26.0	99.2	7.9	7.8	103.1
V3	4.8	5.1	88.6	26.4	26.4	100.6	7.0	7.1	91.3
Y3	4.6	4.8	84.9	26.3	26.2	100.0	7.4	7.4	96.5
J4	5.4	5.5	99.7	25.9	25.6	98.6	7.9	8.1	103.1
M4		4.9		26.4	26.4	100.4	8.0	7.4	104.4
Y4		3.6			26.5			8.6	
FKBG	5.5	5.4	101.4	26.3	26.3	100.1	7.6	7.7	99.0

Notes A and B are given in the appendix.

Table II (Cont)

Averages of Mill Quality Data for SEP-OCT, 1989 - 26 LB Kraft Linerboard

Code	Burst		CD Ring Crush		CD STFI	
	Cur. Av.	Ind. *B	Cur. Av.	Ind. *B	Cur. Av.	Ind. *B
E1	70.0	95.1	29.0	72.9	12.8	99.4
I1	77.0	104.6	32.0	80.5	12.8	99.4
M1	71.0	96.4	34.8		12.9	100.2
R1	71.0	96.4			12.2	94.8
V1	77.0	104.6	51.0	128.2		
W1	76.0	103.2				
D2	74.0	100.5	52.0	130.8	13.8	107.2
I2	72.0					
J2	74.0	100.5	38.0	95.6		
K2	74.0	100.5	37.0	93.0		
N2	79.0	107.3	46.7	117.4		
Q2	76.7		49.9		12.6	
X2	68.5	92.3	32.5			
F3	72.0	95.1			10.9	84.7
V3	70.0	89.6	44.0	110.6		
Y3	66.0					
J4	69.0	93.7	43.0	108.1	14.0	108.7
M4	68.0	92.3	34.0	85.5		
Y4	87.0	118.2				
	75.3				11.0	
FKBG	73.2	99.4	40.7	102.3	12.8	99.2
	73.6		39.8		12.9	

Note B is given in the appendix.

Table III

Averages of Mill Quality Data for NOV-DEC, 1989 - 26 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. #A		Caliper	
	Cur. Av.	Cum. Av.	Ind. #B	Ind. #B	Cur. Av.	Ind. #B
E1	5.1	5.0	93.2	99.6	7.0	91.8
I1	5.0	5.0	91.4	99.2	7.4	97.0
M1	6.3	6.3	115.2	99.2	6.6	86.5
R1	6.9	6.9	126.1	99.2	8.6	112.8
V1	6.0	5.6	109.7	102.3	7.5	98.4
W1	5.6	5.6	102.4	97.7	7.0	91.8
D2		6.0		101.9	7.7	101.0
I2		5.9			6.9	
J2	5.6	5.3	102.4	99.6	8.0	104.9
K2	6.0	5.7	109.7	98.5	7.7	101.0
N2	5.7	5.6	104.2	103.8	7.5	98.4
Q2		4.9			7.9	
X2	4.4	4.5	80.4	100.1	8.2	107.5
F3	6.9	6.6	126.1	99.2	7.8	102.3
V3	5.0	5.0	91.4	103.2	7.0	91.8
Y3	4.7	4.8	85.9	99.8	7.4	97.0
J4	5.5	5.5	100.5	98.2	7.7	101.0
M4		4.8		100.4	7.4	97.0
S4	5.8		106.0	99.9	7.4	97.0
Y4	3.6	3.5	65.8	99.4	8.5	111.5
FKBG	5.5	5.5	100.7	100.1	7.6	99.4

Notes A and B are given in the appendix.

Table III (Cont)

Averages of Mill Quality Data for NOV-DEC, 1989 - 26 LB Kraft Linerboard

Code	Burst PSIG			CD Ring Crush			CD STFI		
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Lb. Cum. Av.	Ind. #B	Cur. Av.	Lb/In. Cum. Av.	Ind. #B
E1	70.0	70.0	95.0	28.5	29.4	71.0	12.1	12.6	93.6
I1	73.0	70.2	99.0	34.0	33.8	84.8		12.6	
M1	74.0	70.3	100.4				12.9	12.8	99.8
R1	72.0	70.8	97.7				12.4	12.7	95.9
V1		83.2		51.9					
W1	77.0	75.2	104.5				13.3	14.0	102.9
D2	75.0	77.7	101.8	47.0	43.3	117.2		15.0	
I2		72.0							
J2	72.0	77.2	97.7	46.0	39.3	114.7			
K2	75.0	73.2	101.8	35.0	35.5	87.2			
N2	83.0	77.3	112.6	49.1	49.1	122.4		13.0	
Q2		69.0		33.0					
X2	73.0	71.2	99.0	45.0		112.2			
F3	69.0	69.3	93.6				11.9	10.4	92.0
V3	66.0	66.2	89.5	44.0	42.1	109.7			
Y3									
J4	74.0	70.5	100.4	44.0	43.9	109.7	15.0	14.4	116.0
M4	72.0	69.8	97.7	39.0	35.3	97.2			
S4	82.0	86.8	111.3						
Y4	77.0	77.0	104.5				12.5	11.3	96.7
FKBG	74.2	73.7	100.6	41.2	40.1	102.6	12.9	12.9	99.5

Note B is given in the appendix.

Table IV

Averages of Mill Quality Data for JUL-AUG, 1989 - 33 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. #A		Caliper	
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Ind. #B	Cum. Av.
E1						
I1	5.4	33.2				9.5
L1	5.0	33.1	101.0	9.5		9.6
M1	6.3	33.5	100.2	9.8		9.6
R1	6.4	33.1	99.2	9.4		9.2
	7.1	33.1	99.2	9.4		9.4
S1						
V1	6.7	33.3	99.3	10.0		10.0
W1	5.8	33.8	101.9	9.4		9.6
X1	6.0	32.8	97.2	8.7		9.0
D2	5.1	33.3				9.6
	6.1	33.5	101.5	9.6		9.7
E2						
I2	6.5	33.1	99.2	9.5		9.1
J2	6.0	33.5	100.5	9.1		8.8
K2	5.4	33.1	99.2	9.9		10.1
N2	5.9	33.2	99.4	9.8		9.7
	6.1	33.6	100.7	9.6		9.8
Q2						
X2	4.9	33.1	99.2	9.8		10.0
F3	5.3	33.2	99.4	9.9		9.9
J3	6.8	33.1	99.2	10.1		10.3
K3	5.0	34.1				9.5
	5.0	34.0	101.7	9.5		9.7
M3						
N3	4.5	33.9	102.1	10.2		10.3
V3	4.6	33.3				9.2
Y3	5.4	33.2	99.4	9.0		9.0
D4	5.1	33.2	99.3	9.5		9.2
	5.2	35.1	101.6	11.0		9.1
J4						
M4	5.4	32.7	99.1	10.0		10.1
N4	5.1	33.6				9.6
S4	6.9	33.0	99.2	9.1		9.6
X4	6.1	33.1	99.2	9.1		8.8
	5.2	33.4				9.5
Y4						
	4.1	33.2	99.1	11.2		10.7
FKBG						
	5.8	33.4	99.9	9.7		9.6

Notes A and B are given in the appendix.

Table IV (Cont)

Averages of Mill Quality Data for JUL-AUG, 1989 - 33 LB Kraft Linerboard

Code	Burst		CD Ring Crush			CD STFI		
	Cur. Av.	Cum. PSIG	Ind. #B	Cur. Av.	Lb. Cum.	Cur. Av.	Lb/In. Cum.	Ind. #B
E1		83.2			50.3		15.6	
I1	87.0	82.8	99.8	46.0	49.2	18.0	15.8	112.6
L1	83.0	83.2	95.2			15.3	16.6	95.7
M1	88.0	87.2	101.0			14.5	14.3	90.7
R1	85.0	81.3	97.5			17.0	17.0	106.3
S1								
V1	87.0	87.3	99.8			16.8	17.5	105.1
W1	103.0	99.2	118.2	72.0	70.5	126.3		
X1	92.0	89.2	105.5			18.5	16.0	115.7
D2	95.0	93.0	109.0	61.0	53.8	107.0	17.5	
		90.0			59.2			
E2								
I2	85.0	82.3	97.5	57.5	58.6	100.9	16.0	100.1
J2	85.0	86.7	97.5	70.0	66.7	122.8		
K2	84.0	90.3	96.4	58.0	57.5	101.8		
	94.0	86.8	107.8	50.0	48.3	87.7		
N2	92.0	87.3	105.5	67.2	69.0	117.9		
Q2								
X2	81.0	83.7	92.9	46.0	46.5	80.7	14.8	15.5
F3	83.0	80.7	95.2				12.4	12.4
J3	85.0	87.0	97.5		45.3			77.5
K3		80.2		47.0	48.5	82.5		
M3								
N3	85.0	86.3	97.5		62.8		19.0	17.0
V3		85.0			61.0			118.8
Y3	80.0	80.5	91.8	63.0	63.0	110.5		
D4	87.0	88.2	99.8	63.0	64.3	110.5	18.0	17.8
	89.0	88.0	102.1					112.6
J4								
M4	91.0	90.2	104.4	55.0	56.6	96.5		
N4		100.7						
S4	84.0	83.7	96.4				16.9	16.9
X4	91.0	90.0	104.4				15.1	14.4
		84.0			52.3			94.4
Y4	92.0	92.5	105.5				14.1	13.9
								88.2
FKBG	87.7	87.2	100.6	58.1	57.0	102.0	16.2	16.0
								101.1

Note B is given in the appendix.

Table V

Averages of Mill Quality Data for SEP-OCT, 1989 - 33 LB Kraft Linerboard

Code	Moisture Content			Adj. Basis Wt. %A			Cur. Av.	Ind. #B	Caliper Mil
	Cur. Av.	Percent Cum. Av.	Ind. #B	Cur. Av.	Lb/M Sq Cum. Av.	Ind. #B			
E1	5.2	5.3	92.6	33.1	33.2	99.2	9.0	9.6	93.6
I1		4.9			33.3			9.5	
L1	6.6	6.2	117.5	33.4	33.5	100.1	10.6	9.7	110.3
M1	6.2	6.3	110.4	33.1	33.1	99.2	8.9	9.2	92.6
R1	6.7	7.0	119.3	33.1	33.1	99.2	9.2	9.4	95.7
S1	6.6	6.7	117.5	33.1	33.3	99.3	10.0	10.0	104.0
V1	6.5	5.9	115.7	34.0	33.9	101.8	9.6	9.5	99.9
W1	6.1	6.0	108.6	32.8	32.8	98.2	8.9	8.9	92.6
X1	5.0	5.1	89.0	32.6	33.3	97.6	9.1	9.6	94.7
D2		6.1		33.9	33.6	101.6	9.7	9.7	100.9
E2	6.5	6.3	115.7	33.1	33.2	99.2	9.5	9.2	98.8
I2	5.8	6.1	103.3	33.5	33.5	100.4	9.2	8.9	95.7
J2	5.5	5.4	97.9	33.2	33.1	99.5	10.2	10.1	106.1
K2	6.0	5.7	106.8	33.0	33.0	99.0	9.7	9.8	100.9
N2	6.0	6.1	106.8	33.8	33.6	101.4	10.0	9.8	104.0
Q2	4.9	5.0	87.2	33.1	33.1	99.2	10.0	9.9	104.0
X2	4.8	5.1	85.5	33.1	33.3	99.3	9.4	9.8	97.8
F3		6.6			33.1			10.2	
J3		4.9			34.1			9.4	
K3		5.0		34.1	34.0	102.1	9.8	9.7	101.9
M3	4.6	4.6	81.9	33.9	33.9	101.7	10.1	10.3	105.1
N3		5.4			33.3			9.2	
V3	5.3	5.4	94.4	33.2	33.2	99.4	8.8	9.0	91.5
Y3	5.1	5.2	90.8	33.3	33.2	99.9	9.2	9.3	95.7
D4		5.5		34.6	34.9	103.7	9.2	9.4	95.7
J4	5.3	5.5	94.4	33.1	32.7	99.1	10.1	10.1	105.1
M4		5.1			33.6			9.7	
N4		7.0			33.1			9.2	
S4	6.1	5.9	108.6	33.1	33.1	99.2	9.1	8.9	94.7
X4	4.7	5.2	83.7	33.9	33.4	101.6	9.0	9.5	93.6
Y4	4.2	4.2	74.8	33.0	33.2	99.0	11.0	10.8	114.4
FKBG	5.6	5.6	100.1	33.4	33.4	100.0	9.6	9.6	99.6

Notes A and B are given in the appendix.

Table V (Cont)

Averages of Mill Quality Data for SEP-OCT, 1989 - 33 LB Kraft Linerboard

Code	Burst		CD Ring Crush		CD STFI	
	Cur. Av.	Ind. #B	Cur. Av.	Ind. #B	Cur. Av.	Ind. #B
E1	86.0	98.4	50.0	87.2	15.6	97.7
I1	83.0		50.3		15.6	
L1	83.3		48.8		16.3	
M1	82.8	92.7			15.6	97.7
R1	89.0	101.9			15.0	94.0
	89.0	101.9			16.1	100.9
S1	91.0	104.2			17.9	112.2
V1	103.0	117.9	80.0	139.5	16.8	105.3
W1	90.0	103.0				
X1	95.0	108.7	55.0	95.9		
D2	89.0	101.9	60.0	104.7	17.5	
E2	84.0	96.1	55.5	96.8	15.6	97.7
I2	85.0	97.3	70.2	122.5		
J2	88.0	100.7	59.0	102.9		
K2	89.0	101.9	55.0	95.9		
N2	90.0	103.0	66.6	116.2		
Q2	85.0	97.3	46.0	80.2	15.1	94.6
X2	83.0	95.0				
F3	86.3				12.4	
J3	80.5		45.6			
K3	89.0	101.9	49.0	85.5		
M3	88.0	100.7				
N3	85.7		62.7		16.4	102.8
V3	85.0		61.0			
Y3	80.0	91.6	63.5	109.9		
D4	88.0	100.7	65.0	113.4	18.0	112.8
	102.0	116.7				
J4	92.0	105.3	56.0	97.7		
M4	90.8		56.4			
N4	101.2					
S4	83.7				17.0	90.9
X4	92.0	105.3			14.5	102.1
	84.0	96.1	48.0	83.7	16.3	
Y4	91.0	104.2				
	93.3				14.0	
FKBG	88.9	101.8	58.6	102.1	16.1	100.7
	87.4		57.3		16.0	

Note B is given in the appendix.

Table VI

Averages of Mill Quality Data for NDV-DEC, 1989 - 33 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. #A		Caliper	
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Cum. Av.	Ind. #B
E1	5.4	5.3	96.0	33.2	33.1	99.5
I1	5.0	5.0	88.9	33.1	33.3	99.2
L1	6.4	6.3	113.8	33.3	33.6	99.8
M1	6.2	6.3	110.2	33.1	33.1	99.2
R1	7.0	6.9	124.4	33.1	33.1	99.2
S1	6.6	6.7	117.3	33.1	33.3	99.3
V1	6.5	6.0	115.5	33.8	33.9	101.2
W1	6.0	6.1	106.6	32.6	32.8	97.8
X1	5.0	5.1	88.9	32.5	33.2	97.3
D2		6.1		33.9	33.6	101.6
E2	6.5	6.3	115.5	33.2	33.2	99.5
I2	6.2	6.0	110.2	33.5	33.5	100.3
J2	5.5	5.4	97.8	33.2	33.1	99.5
K2	5.9	5.7	104.9	33.1	33.0	99.1
N2	5.9	6.1	104.9	33.7	33.6	100.9
Q2	4.9	5.0	87.1	33.1	33.1	99.2
X2	4.8	5.0	85.3	33.7	33.3	100.9
F3	6.6	6.6	117.3	33.0	33.1	98.9
J3	5.0	4.8	88.9	33.1	33.7	99.3
K3		5.0		34.1	34.0	102.2
M3	5.0	4.6	88.9	34.0	34.0	101.9
N3		5.4		33.3	33.3	101.9
V3	5.4	5.4	96.0	33.5	33.2	100.3
Y3	5.2	5.2	92.4	33.2	33.2	99.5
D4		5.6		34.5	34.7	103.4
J4	5.5	5.5	97.8	33.0	32.8	98.8
M4		5.0		33.1	33.5	99.2
N4		7.0		33.1	33.1	99.5
S4	5.7	5.9	101.3	33.2	33.1	99.5
X4	5.4	5.0	96.0	33.5	33.5	100.4
Y4	4.2	4.2	74.6	33.0	33.3	99.0
FKBG	5.7	5.6	100.8	33.3	33.4	99.9

Notes A and B are given in the appendix.

Table VI (Cont)

Averages of Mill Quality Data for NOV-DEC, 1989 - 33 LB Kraft Linerboard

Code	Burst PSIG			CD Ring Crush			CD STFI		
	Cur. Av.	Cum. Av.	Ind. *B	Cur. Av.	Lb. Cum. Av.	Ind. *B	Cur. Av.	Lb./In. Cum. Av.	Ind. *B
E1	88.0	84.0	100.1	46.0	50.3	79.7	15.1	15.6	94.2
I1	87.0	83.4	99.0	47.0	48.2	81.5		16.6	
L1	84.0	82.4	95.6				16.6	15.8	103.5
M1	89.0	87.8	101.3				17.8	14.8	111.0
R1	87.0	83.0	99.0				16.7	16.9	104.1
S1	85.0	88.2	96.7				16.8	17.8	104.8
V1		102.2			74.7				
W1	90.0	89.7	102.4						
X1	95.0	93.0	108.1	56.0	54.2	97.1	17.0	16.3	106.0
D2	93.0	91.3	105.8	65.0	60.7	112.7		17.5	
E2	83.0	83.2	94.5	54.0	57.4	93.6		15.8	
I2	84.0	85.9	95.6	66.8	68.0	115.8			
J2	88.0	87.8	100.1	63.0	57.5	109.2			
K2	83.0	88.3	94.5	55.0	50.0	95.3			
N2	88.0	88.2	100.1	68.1	67.7	118.0			
Q2	83.0	82.7	94.5	46.0	46.2	79.7		15.2	
X2	81.0	82.5	92.2	57.0		98.8			
F3	85.0	86.3	96.7				13.8	12.4	86.1
J3	88.0	81.7	100.1	55.0	46.8	95.3			
K3	84.0	87.7	95.6	50.0	48.8	86.7			
M3	88.0	85.8	100.1		62.5		20.5	16.6	127.8
N3		85.0			61.0				
V3	84.0	80.0	95.6		63.5	124.8			
Y3	89.0	88.0	101.3	72.0	64.3	112.7	19.0	18.1	118.5
D4	91.0	93.2	103.6	65.0					
J4	96.0	90.2	109.3	64.0	56.6	110.9			
M4	96.0	103.0	109.3						
N4		84.5						17.1	97.3
S4	93.0	89.4	105.8				15.6	14.4	
X4	88.0	85.3	100.1	49.5	50.2	85.8	15.6	16.3	97.3
Y4	90.0	94.5	102.4					14.1	
FKEG	87.9	87.9	100.0	57.6	57.7	99.9	16.8	16.0	104.6

Note B is given in the appendix.

Table VII

Averages of Mill Quality Data for JUL-AUG, 1989 - 38 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. #A		Caliper	
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Cum. Av.	Ind. #B
E1		5.3				
K1		6.0				
L1	6.9	6.4	118.3	38.3		
R1	7.0	6.9	120.1	38.1	11.1	103.7
V1	6.2	6.1	106.3	38.9	11.0	102.7
					10.9	101.8
W1		6.2				
Y1		6.0				
E2	6.5	6.3	111.5	38.1		
G2	6.0	5.9	102.9	38.5	10.7	99.9
J2	5.5	5.4	94.3	38.1	10.9	101.8
					11.2	104.6
N2	6.2	6.3	106.3	38.9		
Q2	6.0	6.0	102.9	38.1	11.3	105.5
W2	5.7	5.7	97.8	38.6	10.7	99.9
Y2	5.8	5.9	99.5	39.2	11.0	99.9
J3	5.6	5.2	96.0	38.9	11.2	102.7
					11.3	104.6
K3		5.1		38.8		
N3		5.4			10.7	99.9
U3		5.6			11.0	
V3	5.7	5.9	97.8	38.2		
W3		6.4			9.9	92.5
					11.2	
Y3	5.7	5.7	97.8	38.3		
D4		5.7			10.6	99.0
G4	5.9	5.9	101.2	38.1	10.8	100.9
N4		6.7		38.1	10.4	97.1
W4		6.3		38.1	10.4	
					10.3	
X4		5.2		38.4		
FKEG	6.0	5.8	103.8	38.5	10.8	101.0

Notes A and B are given in the appendix.

Table VII (Cont)

Averages of Mill Quality Data for JUL-AUG, 1989 - 38 LB Kraft Linerboard

Code	Burst PSIG		Ind. *B	CD Ring Crush			CD STFI		
	Cur. Av.	Cum. Av.		Cur. Av.	Lb. Cum. Av.	Ind. *B	Cur. Av.	Lb./In. Cum. Av.	Ind. *B
E1		97.8			63.0			18.8	
K1		95.0						19.0	
L1	90.0	90.3	90.7					18.2	89.6
R1	98.0	96.0	98.7				17.1	18.2	104.3
V1	106.0	107.5	106.8	80.0	78.3	114.7	19.9	19.6	
W1		101.0						18.4	
Y1		125.0						18.8	
E2	93.0	93.7	93.7	69.0	73.0	99.0	18.2		95.3
G2	103.0	105.5	103.8	70.0	68.0	100.4	19.3	18.4	101.1
J2	94.0	102.5	94.7	71.0	70.8	101.8			
N2	100.0	97.8	100.7	80.8	83.7	115.9			
B2	96.0	97.0	96.7	55.0	57.0	78.9	17.8	17.9	93.3
W2	100.0	100.5	100.7	66.4	63.9	95.2			
Y2	95.0	97.4	95.7	80.2	80.3	115.0			
J3	98.0	93.2	98.7	60.0	61.2	86.0			
K3	93.0	95.2	93.7	57.0	58.0	81.7			
N3		97.0			73.0				
U3		108.0			77.6				
V3	95.0	93.8	95.7	78.0	79.2	111.9			
W3		115.7			64.7				
Y3	96.0	97.8	96.7	74.0	74.3	106.1	20.0	20.0	104.8
D4	99.0	100.0	99.7						
G4	97.0	96.2	97.7	68.0	62.6	97.5	18.9	18.8	99.0
N4		96.0						19.4	
W4		105.3						20.8	
X4		98.0			56.0				
FKBG	97.1	99.3	97.8	70.0	69.7	100.3	18.7	19.1	98.2

Note B is given in the appendix.

Table VIII

Averages of Mill Quality Data for SEP-OCT, 1989 - 38 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. #A		Caliper	
	Cur. Av.	Ind. #B	Cur. Av.	Ind. #B	Cur. Av.	Ind. #B
E1	5.3		38.4		10.6	
K1	6.0		38.1		10.4	
L1	7.0	119.4	38.4	99.6	11.0	102.5
R1	6.9		38.1		10.8	
V1	6.5	110.9	38.9	101.2	10.6	98.8
W1	6.2		37.0		9.9	
Y1	6.0	107.5	37.5	98.5	10.2	95.1
E2	6.3		38.1		10.5	
G2	6.1	104.1	38.4	100.0	11.2	104.4
J2	5.5	93.9	38.1	99.0	10.6	98.8
N2	6.3	107.5	38.5	100.1	11.2	104.4
Q2	6.0		38.1		10.7	
W2	5.7	97.3	37.9	98.5	10.1	94.1
Y2	5.7	97.3	39.4	102.3	11.1	103.5
J3	5.2		38.8	100.9	11.4	106.3
K3	5.0		39.1	101.7	10.9	101.6
N3	5.5	93.9	38.4	99.8	10.7	99.7
V3	5.9	99.0	38.3	99.3	9.8	91.3
W3	6.4		39.5		11.2	
Y3	5.7	95.6	38.1	99.2	10.7	99.7
D4	5.8		38.0	98.7	8.1	75.5
G4	5.9		38.1		10.6	
N4	6.7		38.1		10.4	
S4	6.3	107.5	42.1	109.5	11.9	110.9
W4	6.0	102.4	37.8	98.3	11.8	110.0
X4	5.7	97.3	38.6	100.4	10.2	95.1
FKBG	6.0	102.4	38.6	100.4	10.7	99.5

Notes A and B are given in the appendix.

Table IX

Averages of Mill Quality Data for NDV-DEC, 1989 - 38 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. #A		Caliper	
	Cur. AV.	Cum. AV.	Ind. #B	Cur. AV.	Cum. AV.	Ind. #B
E1		5.2		38.4	10.6	
K1		6.0		38.1	10.4	
L1	6.4	6.7	108.7	38.4	10.5	98.0
R1	6.8	7.0	115.5	38.1	10.1	94.3
V1	6.4	6.2	108.7	39.1	11.0	102.7
W1		6.3		36.8	9.8	
Y1	6.4	6.2	108.7	37.8	10.5	98.0
E2		6.3		38.1	10.6	
G2	5.8	5.9	98.5	38.4	10.5	98.0
J2	5.7	5.4	96.8	38.2	11.4	106.4
N2	5.9	6.3	100.2	38.6	11.5	107.3
Q2	6.0	6.0	101.9	38.1	11.1	103.6
W2	5.9	5.7	100.2	38.2	10.3	96.1
Y2		5.8		39.1	10.8	
J3	5.4	5.2	91.7	38.4	10.8	100.8
K3		5.0		38.8	11.4	106.4
N3		5.4		38.4	10.9	
V3	5.9	5.9	100.2	38.5	10.3	96.1
W3		6.6		39.5	11.2	
Y3	5.6	5.7	95.1	38.1	10.4	97.1
D4		5.8		38.1	10.3	96.1
G4		5.9		38.1	10.4	
N4		6.7		38.1	10.4	
S4		6.3		42.1	11.9	
W4	5.8	6.2	98.5	37.5	12.0	112.0
X4	5.6	5.4	95.1	38.6	10.0	93.3
FKBG	6.0	5.9	101.4	38.3	10.8	100.4

Notes A and B are given in the appendix.

Table IX (Cont)

Averages of Mill Quality Data for NOV-DEC, 1989 - 38 LB Kraft Linerboard

Code	Burst		CD Ring Crush		CD STFI	
	Cur. Av.	Ind. #B	Cur. Av.	Ind. #B	Cur. Av.	Ind. #B
E1						
K1						
L1	97.0	97.7				
R1	100.0	100.7			18.9	98.7
V1			80.7		19.2	100.2
W1						
Y1	99.0	99.7			18.4	96.0
E2						
G2	103.0	103.7	71.0	94.0		
J2	93.0	93.7	74.0	105.4		
N2						
Q2	97.0	97.7	76.6	109.2		
W2	95.0	95.7	63.0	89.8		
Y2	104.0	104.7	65.5	93.3		
J3					17.9	
K3						
N3	95.0	95.7	57.0	81.2		
V3	96.0	96.7	70.5	126.8		
W3						
Y3	100.0	100.7	79.0	112.6	21.0	109.6
D4						
G4	104.0	104.7				
N4			62.5		18.9	
S4					19.4	
W4	118.0	118.8	80.3		17.8	119.0
					22.8	
X4	98.0	98.7	62.5	89.1	18.2	95.0
FKBG	99.7	100.4	69.8	99.4	19.8	103.1

Note B is given in the appendix.

Table X

Averages of Mill Quality Data for JUL-AUG, 1989 - 42 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. #A		Caliper	
	Cum. %	Ind. #B	Lb/M Sq Ft	Ind. #B	Mil	Ind. #B
	Cur. Av.		Cur. Av.		Cur. Av.	
C1	5.7	97.0	42.3	100.0	11.6	98.7
E1	4.9		42.1		11.5	
K1	6.0	102.1	42.1	99.5	11.8	99.6
L1	6.8	115.7	42.4	100.0	11.3	103.0
M1	6.3	107.2	42.1	99.5	12.0	97.0
			42.1		11.5	
O1	5.6		42.8		11.3	
Q1	5.1	88.4	42.2	99.5	11.9	105.6
R1	7.1	120.8	42.1	99.5	12.2	100.4
S1	6.7	114.0	42.2	99.6	12.0	102.1
U1	5.6		42.7		12.4	
V1	6.4	108.9	42.6	100.7	11.8	100.4
W1	6.3	110.6	41.4	97.7	11.2	95.3
X1	5.3	91.8	41.4	97.6	11.9	101.3
Y1	6.4	108.9	41.7	98.5	11.7	99.6
E2	6.5	110.6	42.1	99.5	11.6	96.2
			42.1		11.2	
G2	6.2	105.5	42.2	99.7	11.3	99.6
J2	5.6		42.1		11.4	
L2	6.0	102.1	42.3	99.9	12.5	98.7
M2	6.2	108.9	42.1	99.5	11.2	102.1
N2	6.4	110.6	42.4	100.1	12.0	103.0
			42.4		12.1	
P2	5.4	91.8	42.2	99.7	12.5	91.9
Q2	5.6		42.3		11.0	
W2	6.0	102.1	42.0	99.5	12.0	96.2
X2	5.6	95.3	42.1	100.1	11.3	97.0
Y2	6.0	102.1	42.4	100.9	11.4	102.1
			42.7		12.0	
I3	3.6		42.8		10.8	
J3	5.4	91.8	42.2	99.1	12.2	103.8
K3	5.2		42.5	101.1	11.7	103.8
L3	5.6	102.1	43.1	100.6	12.2	94.5
M3	4.8	81.6	43.3	101.4	11.1	109.0
			42.9		12.8	
N3	5.5	95.3	42.3	100.0	12.0	101.3
U3	5.9	102.1	42.9	101.3	10.9	92.8
V3	6.1	103.8	42.2	99.7	10.8	91.9
W3	5.8		43.1	101.8	12.3	104.7
Y3	5.9	100.4	42.4	99.5	12.2	100.4
			42.1		11.8	
D4	5.8		42.2	99.2	11.0	93.6
E4	5.0		42.7	99.2	11.1	108.1
G4	5.9	100.4	43.3	102.2	12.2	99.6
H4	5.1	86.7	42.0	99.3	12.7	99.6
N4	7.1	120.8	41.9	99.2	11.7	99.6
			42.1	99.5	11.6	94.5
			42.1		11.5	
R4	5.2	88.4	42.4	100.0	11.1	104.7
S4	6.2	105.5	42.1	99.5	12.3	101.3
W4	6.0	102.1	42.1	98.5	11.9	102.1
X4	5.4		42.0		11.0	
Y4	5.2	88.4	42.1	99.5	12.6	110.7
			42.1		11.6	
FKB6	6.0	101.9	42.2	99.8	13.0	100.2
			42.3		11.8	

Notes A and B are given in the appendix.

Table X (Cont)

Averages of Mill Quality Data for JUL-AUG, 1989 - 42 LB Kraft Linerboard

Code	Burst PSIG		Ind. #B	CD Ring Crush		Ind. #B	Cur. Av.		CD STFI Lb/In.		Ind. #B
	Cur. Av.	Cum. Av.		Cur. Av.	Lb. Cum. Av.		Cur. Av.	Lb. Cum. Av.			
C1	112.0	110.5	104.7	88.0	85.3	111.1	23.0	21.9	113.3		
E1		111.0			75.5						
K1	103.0	102.5	96.3				19.9	20.7	98.0		
L1	102.0	103.8	95.4				19.8	20.9	97.6		
M1	109.0	107.3	101.9				19.9	18.8	98.0		
O1		115.0			74.4		18.4	19.4	90.7		
Q1	109.0	113.8	101.9				20.8	20.9	102.5		
R1	108.0	105.0	101.0				18.9	20.7	93.1		
S1	103.0	102.2	96.3		79.8			21.7			
U1		104.7									
V1	116.0	119.2	108.5	85.0	89.9	107.3	21.5	20.3	105.9		
W1	103.0	106.7	96.3								
X1	108.0	106.8	101.0	72.0	73.8	90.9	19.5	19.7	96.1		
Y1	115.0	120.3	107.5	73.5	78.2	92.8	19.1		94.1		
E2	103.0	102.7	96.3								
G2	107.0	110.8	100.1	72.0	71.2	90.9	19.9	19.3	98.0		
J2		106.3			78.7						
L2	106.0	103.0	99.1				23.0	22.5	113.3		
M2	120.0	116.3	112.2	89.7	92.4	113.2					
N2	106.0	102.7	99.1								
P2	105.0	104.3	98.2	81.0	84.3	102.3					
Q2		103.5			71.0			20.0			
W2	105.0	107.2	98.2	73.1	71.1	92.3					
X2	100.0	101.7	93.5								
Y2	105.0	104.5	98.2	88.1	90.3	111.2					
I3		114.0						17.9			
J3	102.0	100.5	95.4	65.5	70.5	82.7					
K3	101.0	102.8	94.5	62.0	64.5	78.3					
L3	113.0	112.2	105.7	101.0	98.3	127.5					
M3	102.0	101.3	95.4		78.3		21.1	20.8	104.2		
N3											
U3	108.0	107.2	101.0	81.0	83.8	102.3					
V3	107.0	107.7	100.1	92.8	88.7	117.1					
W3	104.0	105.0	97.3	92.0	91.1	116.1					
X3	109.0	109.7	101.9	75.0	67.8	94.7		17.3			
Y3	104.0	105.0	97.3	85.0	83.3	107.3	22.0	22.0	108.4		
D4											
E4	106.0	103.0	99.1								
G4	105.0	107.8	98.2	68.0	67.0	85.8					
H4	103.0	103.0	96.3	74.0	72.7	93.4	20.5	20.4	101.0		
N4	102.0	102.0	95.4	72.0	71.8	90.9					
R4	106.0	106.3	99.1				20.5	21.0	101.0		
S4											
W4	114.0	109.8	106.6				19.1	18.7	94.1		
X4	106.0	106.0	99.1				18.4	18.6	90.7		
Y4	118.0	108.7	110.4				21.6	23.1	106.4		
X4	105.7				69.0						
Y4	107.0	108.2	100.1				17.8	17.5	87.7		
FKBG	106.9	106.9	100.0	79.5	79.2	100.4	20.2	20.3	99.7		

Note B is given in the appendix.

Table XI

Averages of Mill Quality Data for SEP-OCT, 1989 - 42 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. #A		Caliper	
	Cum. Av.	Ind. #B	Cum. Av.	Ind. #B	Cum. Av.	Ind. #B
C1	5.6	95.2	42.4	100.1	11.4	96.9
E1	4.9		42.1		11.8	
K1	6.0	102.0	42.1	99.5	11.3	96.1
L1	7.0	119.0	42.4	100.0	12.0	102.0
M1	6.6	112.2	42.2	99.7	10.8	91.8
D1	5.6		42.8		11.3	
Q1	5.1	86.7	42.2	99.6	12.2	103.7
R1	6.7		42.1		12.1	
S1	6.6	112.2	42.2	99.6	12.0	102.0
U1	5.2	88.4	43.2	102.0	11.9	101.2
V1	6.7	113.9	42.4	100.1	11.9	101.2
W1	6.6	112.2	41.5	98.1	11.1	94.4
X1	5.7	96.9	41.3	97.4	11.6	98.6
Y1	6.5	110.5	41.7	98.6	11.4	96.9
E2	6.4	108.8	42.1	99.5	16.3	138.6
G2	6.1	103.7	42.2	99.6	11.5	97.8
J2	5.5		42.0		12.6	
L2	6.1	103.7	42.3	99.8	11.1	94.4
M2	6.4	108.8	42.3	100.0	12.6	107.1
N2	6.4	108.8	42.3	100.0	12.4	105.4
P2	5.4	91.8	42.2	99.7	10.9	92.7
Q2	6.0	102.0	42.1	99.7	12.3	95.2
W2	6.0	102.0	42.3	99.9	12.1	102.9
X2	5.9	98.6	43.2	102.1	12.2	103.7
Y2			42.8		11.6	
I3	3.6		42.1		10.7	
J3	5.3		42.3	99.1	12.5	106.3
K3	5.1		43.1	101.8	12.0	102.0
L3	5.7	100.3	42.7	100.7	11.3	96.1
M3	5.0	86.7	42.9	100.9	12.8	108.8
N3	5.6	95.2	42.3	100.0	12.0	102.0
U3	6.0	102.0	42.6	100.6	11.0	93.5
V3	5.9	100.3	42.3	100.0	10.7	91.0
W3	5.8		43.1	101.8	12.4	105.4
Y3	5.9	100.3	42.2	99.5	11.9	101.2
D4	5.8		42.8	101.1	13.1	111.4
E4	4.9		43.3	102.0	12.6	107.1
G4	5.9	100.3	42.1	99.5	12.1	102.9
H4	5.5	88.4	42.1	99.3	12.0	102.0
N4	7.0	117.3	42.1	99.5	11.1	94.4
R4	5.2	88.4	42.2	99.5	12.3	104.6
S4	6.2		42.1		11.1	
W4	6.0	102.0	41.6	98.3	11.8	100.3
X4	5.4	91.8	42.4	100.2	11.0	93.5
Y4	5.2	88.4	42.2	99.5	13.0	110.5
FKBG	6.0	101.1	42.3	100.0	11.9	101.5

Notes A and B are given in the appendix.

Table XI (Cont)

Averages of Mill Quality Data for SEP-OCT, 1989 - 42 LB Kraft Linerboard

Code	Burst PSIG		CD Ring Crush		CD STFI	
	Cur. Av.	Ind. *B	Cur. Av.	Ind. *B	Cur. Av.	Ind. *B
C1	110.0	111.0	86.0	85.9	22.0	22.3
E1		111.0		75.5		
K1	105.0	102.8			20.2	20.6
L1	101.0	103.5			20.3	20.4
M1	108.0	106.7			18.0	19.0
D1		114.0		72.5		
Q1	109.0	113.5				19.4
R1		106.5				20.9
S1	102.0	102.3			19.8	20.4
U1	118.0	104.4		80.3		21.8
V1	116.0	119.3	85.0	90.6	21.2	20.1
W1	105.0	106.0				104.7
X1	107.0	107.5	76.0	74.3		
Y1	112.0	119.8			25.3	19.5
E2	104.0	102.7	70.5	77.3	18.6	19.1
G2						91.9
J2	108.0	110.3	72.0	71.2	19.7	19.4
L2	101.0	105.5		78.0		97.3
M2	118.0	117.5				
N2	104.0	102.8	89.2	91.8	24.0	22.7
P2						118.6
Q2	107.0	104.3	80.0	84.3		
W2	107.0	107.2		78.0		19.5
X2	104.0	101.5	71.9	71.5		
Y2	107.0	104.8	91.6	89.5		
I3		114.0				17.9
J3	102.0	101.2	68.0	69.3		
K3	105.0	103.0	66.0	64.7		
L3	108.0	112.3	93.0	98.7		
M3	102.0	101.2		78.3	22.0	20.8
N3						108.7
U3	108.0	106.2	81.0	82.3		
V3	110.0	107.2	92.3	89.5		
W3	103.0	104.5	94.0	92.2		
X3	108.0	110.2	75.0	68.8		
Y3	104.0	105.0	86.0	83.3	17.3	17.3
D4					22.0	22.0
E4	111.0	103.8				108.7
G4	108.0	108.2				
H4	103.0	102.8	69.0	68.0		
N4	99.0	102.0	73.0	73.2	20.2	20.5
R4	108.0	105.3	74.0	71.8		
S4					21.1	21.0
W4	111.0	111.0				104.3
X4	125.0	110.3				
Y4	102.0	106.0	89.2	69.0		
	104.0	108.7				
FKBG	107.2	107.0	79.6	79.6	21.0	20.2
			100.2	100.0		103.8

Note B is given in the appendix.

Table XII

Averages of Mill Quality Data for NOV-DEC, 1989 - 42 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis		Wt. #A		Caliper	
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Cum. Av.
C1	5.7	5.7	96.4	42.3	42.3	100.0	11.5	11.5
E1		4.9		42.1	42.1			11.8
K1	6.0	6.0	101.5	42.1	42.1	99.5	11.8	11.4
L1	6.9	6.7	116.7	42.3	42.5	99.9	11.9	12.1
M1	6.3	6.3	106.6	42.2	42.2	99.8	10.8	11.5
O1		5.8		42.8	42.8			11.2
Q1	5.2	5.1	88.0	42.2	42.5	99.6	12.6	12.0
R1	6.9	6.7	116.7	42.1	42.1	99.5	11.6	12.1
S1	6.6	6.7	111.7	42.2	42.2	99.6	12.0	12.0
U1		5.4		42.8	42.8			12.3
V1	6.5	6.5	110.0	42.6	42.6	100.6	11.8	11.8
W1	6.6	6.5	111.7	41.6	41.7	98.3	11.0	11.2
X1	5.6	5.6	94.7	41.2	41.7	97.2	11.8	12.1
Y1	6.4	6.4	108.3	41.7	41.9	98.6	11.4	11.7
E2	6.5	6.3	110.0	42.1	42.1	99.5	11.2	12.2
G2	6.0	6.2	101.5	42.0	42.2	99.2	11.2	11.4
J2		5.5		42.0	42.0			12.8
L2	6.0	6.1	101.5	42.2	42.3	99.7	11.4	11.3
M2	6.6	6.3	111.7	42.2	42.2	99.8	12.1	12.1
N2	6.4	6.4	108.3	42.3	42.4	100.0	12.3	12.5
P2	4.3	5.5	72.7	42.6	42.3	100.7	10.2	10.9
Q2	6.0	6.0	101.5	42.1	42.1	99.5	12.2	12.3
W2	6.0	6.0	101.5	42.2	42.2	99.8	11.2	11.3
X2	5.6	6.0	94.7	42.5	42.4	100.4	11.7	12.0
Y2	5.8	5.9	98.1	43.1	42.9	101.8	12.3	11.7
J3	5.4	5.3	91.4	41.9	42.1	98.9	12.0	11.9
K3		5.2		43.1	43.1	101.8	12.4	12.1
L3	5.9	5.8	99.8	42.7	43.0	100.8	11.4	11.8
M3	5.2	5.0	88.0	42.7	42.9	100.8	12.9	12.8
N3	5.6	5.5	94.7	42.3	42.3	100.0	11.9	12.0
U3	5.9	5.9	99.8	42.9	42.7	101.2	10.9	11.0
V3	5.8	6.1	98.1	42.3	42.3	100.0	11.1	10.8
W3		5.8		43.1	42.7	101.8	12.2	12.2
Y3	5.9	5.9	99.8	42.2	42.1	99.6	11.8	11.8
D4		5.8		42.3	42.5	99.9	11.1	11.5
E4		4.9		43.2	43.3	102.0	12.5	12.3
G4	5.9	5.9	99.8	42.0	42.1	99.3	11.8	11.7
H4	5.2	5.4	88.0	42.1	42.0	99.3	11.9	11.7
N4	6.8	7.0	115.0	42.1	42.1	99.5	11.4	11.1
R4	5.2	5.2	88.0	42.6	42.4	100.5	12.5	12.3
S4	6.2	6.2	104.9	42.1	42.1	99.5	11.8	11.2
W4	5.8	6.2	98.1	41.5	41.8	98.1	11.9	11.9
X4	5.6	5.4	94.7	42.3	42.1	100.0	11.3	11.6
Y4	5.2	5.2	88.0	42.2	42.3	99.6	12.5	12.8
FKBG	5.9	5.9	100.3	42.3	42.3	99.9	11.7	11.8

Notes A and B are given in the appendix.

Table XII (Cont)

Averages of Mill Quality Data for NOV-DEC, 1989 - 42 LB Kraft Linerboard

Code	Burst PSIG			CD Ring Crush			CD STFI		
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Lb. Cum. Av.	Ind. #B	Cur. Av.	Lb/In. Cum. Av.	Ind. #B
C1	112.0	110.8	104.6	89.0	86.4	111.6	23.0	22.4	112.9
E1	111.0	111.0		75.5					
K1	103.0	103.2	96.2				19.7	20.4	96.7
L1	101.0	103.0	94.3				20.7	20.5	101.6
M1	111.0	107.2	103.6				18.9	18.8	92.8
O1		113.3			73.0				
Q1	112.0	113.0	104.6				20.6	19.4	101.2
R1	109.0	106.5	101.8				20.3	20.3	99.7
S1	102.0	102.3	95.2		80.5				
U1		106.6							
V1		120.0			90.4				
W1	105.0	105.0	98.0				20.7	20.1	101.6
X1	108.0	107.3	100.8	78.0	75.0	97.8			
Y1	108.0	119.2	100.8				20.1	20.4	98.7
E2	104.0	103.0	97.1	73.5	75.9	92.2		18.9	
G2	108.0	109.8	100.8	67.0	71.3	84.0		19.5	
J2		104.0			77.0				
L2	105.0	103.2	98.0	83.0		104.1			
M2	130.0	118.7	121.4	77.0		96.6	22.0	23.0	108.0
N2	104.0	103.0	97.1	91.0	90.8	114.1			
P2	104.0	105.2	97.1		84.1				
Q2	103.0	102.0	96.2	70.0	78.0	87.8		19.5	
W2	105.0	107.7	98.0	71.0	71.8	89.0			
X2	99.0	102.2	92.4	72.0		90.3			
Y2	103.0	105.5	96.2	89.9	90.0	112.7			
J3	102.0	101.7	95.2	118.0	69.3	148.0			
K3	103.0	103.5	96.2	70.0	64.7	87.8			
L3	111.0	110.7	103.6	92.5	97.1	116.0			
M3	101.0	101.2	94.3	79.0			24.2	21.2	118.8
N3	106.0	106.0	99.0	82.0	81.5	102.8			
U3	109.0	107.5	101.8	90.8	90.4	113.9			
V3	103.0	104.2	96.2	107.0	93.6	134.2			
W3	108.0	110.0	100.8	82.0	70.2	102.8			
Y3	107.0	104.8	99.9	87.0	84.3	109.1	22.0	17.3	108.0
D4	104.0	105.7	97.1					22.2	
E4	139.0	108.3	129.8	70.0	68.2	87.8			
G4	102.0	102.8	95.2	75.0	73.5	94.0		20.5	
H4	101.0	101.6	94.3	73.0	72.4	91.5			
N4	107.0	106.3	99.9				21.4	21.0	105.1
R4	108.0	111.8	100.8					18.8	
S4	107.0	105.6	99.9				18.9	18.4	92.8
W4	124.0	112.8	115.8		89.2		23.8	22.4	116.9
X4	104.0	105.2	97.1	72.0	68.5	90.3	19.4	19.4	95.3
Y4	105.0	108.5	98.0					17.7	
FKBG	107.4	107.1	100.2	81.8	79.7	102.5	21.0	20.4	103.3

Note B is given in the appendix.

Table XIX

Averages of Mill Quality Data for JUL-AUG, 1989 - 69 LB Kraft Linerboard

Code	Moisture Content			Adj. Basis Wt. %A			Caliper Mil	
	Cur. Av.	Percent Cum. Av.	Ind. #B	Cur. Av.	Lb/M Sq Cum. Av.	Ind. #B		
C1	6.9	6.9	108.5	69.0	68.9	99.3	18.3	97.2
K1	6.9	6.9	108.5	69.2	69.2	99.7	19.3	101.4
L1					69.8			
M1	6.4	6.3	100.7	69.6	69.4	100.3	17.9	94.0
O1	6.2	6.0	97.5	70.2	70.0	101.1	19.3	101.4
Q1								
U1	5.6	5.7	88.1	69.2	69.5	99.7	19.5	102.4
V1	6.4	6.5	100.7	70.6	70.0	101.6	19.9	104.5
W1	5.7	5.7	89.7	69.4	70.3	100.0	18.7	98.2
X1	7.0	6.8	110.1	68.4	68.4	98.5	19.1	100.3
	5.8	6.0	91.2	67.3	68.5	96.9	19.4	101.9
Y1								
E2	6.8	6.7	107.0	69.1	69.3	99.5	18.6	97.7
G2	6.3	6.4	99.1	69.1	69.3	99.5	17.9	94.0
L2	6.4	6.9	100.7	69.4	69.4	100.0	20.1	105.6
M2	7.6	7.5	119.5	69.2	69.2	99.7	18.7	98.2
P2								
W2	6.3	6.4	99.1	69.4	69.4	99.9	18.9	99.3
Y2	6.9	7.0	108.5	69.2	69.3	99.7	18.1	95.1
I3	5.8	6.0	96.0	70.1	69.8	100.9	19.6	103.0
J3	6.5	6.5	91.2	69.2	69.2	99.7	18.1	95.1
			102.2	69.0	69.5	99.3	18.8	98.8
L3								
N3	6.1	5.7	96.0	69.4	69.6	99.9	18.2	95.6
U3	5.6	5.6	88.1	69.4	69.4	100.0	19.5	102.4
W3		6.7						
D4		5.8		70.8	69.8	102.0	20.2	106.1
		6.3		69.0	69.6	99.4	19.3	101.4
E4								
H4	6.8	5.4	107.0	70.9	70.7	102.1	19.7	103.5
N4	6.8	6.5	107.0	68.8	68.8	99.1	19.6	103.0
S4	6.3	7.2	99.1	69.2	69.2	99.7	14.1	74.1
X4		5.9		69.0	69.5	99.4	19.6	103.0
					69.7		19.4	
FKBG	6.4	6.4	100.7	69.4	69.4	99.9	18.9	99.1

Notes A and B are given in the appendix.

Table XIII (Cont)

Averages of Mill Quality Data for JUL-AUG, 1989 - 69 LB Kraft Linerboard

Code	Burst PSIG			CD Ring Crush			CD STFI		
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Lb. Cum. Av.	Ind. #B	Cur. Av.	Lb/In. Cum. Av.	Ind. #B
C1	148.0	146.0	100.9	119.0	118.2	93.5	31.0	31.3	99.6
K1	140.0	139.2	95.5				33.4	32.2	107.3
L1	146.0	135.2						33.1	
M1	144.5	144.5	99.6				34.7	32.0	111.5
O1	143.0	138.5	97.5	117.0	115.1	91.9			
Q1	148.0	148.8	100.9				29.9	30.9	96.1
U1	146.0	144.2	99.6		121.8		31.9	32.6	102.5
V1	174.0	185.3	118.7	145.0	154.8	113.9			
W1	141.0	142.7	96.2				32.3	30.4	103.8
X1	160.0	155.3	109.1	124.0	121.2	97.4			
Y1		156.6					30.0		
E2	156.0	146.2	106.4	126.0	133.8	99.0	30.9		99.3
G2	155.0	158.2	105.7	121.0	118.0	95.1	33.4	31.7	107.3
L2	139.0	137.8	94.8						
M2	166.0	148.3	113.2				34.5	32.8	110.9
P2	145.0	144.5	98.9	136.0	139.9	106.9			
W2	151.0	153.3	103.0	125.0	122.0	98.2			
Y2	137.0	146.0	93.4	140.0	145.6	110.0			
I3	149.0	149.3	101.6				28.9	28.7	92.9
J3	128.0	135.7	87.3		122.8				
L3	152.0	154.8	103.7	151.0	150.6	118.7			
N3	150.0	147.0	102.3	107.0	133.2	84.1			
U3		144.0			149.4			24.9	
W3	154.0	154.0	105.0	126.0	107.8	99.0			
D4	143.0	148.7	97.5						
E4	137.0	138.2	93.4	111.0	110.7	87.2			
H4	130.0	130.2	88.7	116.0	125.6	91.2			
N4	152.0	150.3	103.7				31.5	32.1	101.2
S4	142.0	145.5	96.9				28.4	28.9	91.3
X4		135.7			122.9			29.0	
FKBG	147.4	146.6	100.5	126.0	127.3	99.0	31.7	31.1	102.0

Note B is given in the appendix.

Table XIV

Averages of Mill Quality Data for SEP-OCT, 1989 - 69 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. *A		Caliper	
	Cur. Av.	Cum. Av.	Ind. *B	Cur. Av.	Cum. Av.	Ind. *B
C1	6.7	6.9	105.5	69.1	68.9	99.5
K1	6.9	6.9	108.6	69.1	69.2	99.6
L1		6.4			69.8	
M1		6.3			69.5	
O1	6.1	6.0	96.0	69.5	70.1	100.0
Q1	5.6	5.7	88.2	69.2	69.5	99.7
U1	6.3	6.4	99.2	70.0	70.2	100.9
V1	5.9	5.7	92.9	70.4	70.1	101.4
W1	7.2	7.0	113.4	67.0	68.4	96.6
X1	6.0	6.0	94.5	67.4	68.3	97.1
Y1	6.7	6.7	105.5	68.7	69.3	99.0
E2	6.7	6.6	105.5	69.2	69.1	99.7
G2	6.5	6.4	102.3	69.2	69.2	99.6
L2	6.8	6.9	107.1	69.4	69.4	100.0
M2	7.6	7.6	119.6	69.2	69.2	99.7
P2	6.4	6.4	100.8	69.4	69.4	99.9
W2	7.0	7.0	110.2	69.2	69.3	99.7
Y2	6.2	6.1	97.6	69.9	69.8	100.7
I3	6.0	6.0	94.5	69.2	69.2	99.7
J3		6.5		68.8	69.3	99.1
L3						
N3	6.0	5.8	94.5	69.3	69.4	99.9
U3	5.5	5.6	86.6	69.6	69.4	100.3
W3		5.7			70.0	103.0
D4		5.8		70.8	70.0	99.4
		6.2		69.0	69.5	
E4						
H4	7.1	5.4	111.8	70.9	70.8	102.1
N4	6.8	6.4	107.1	68.6	68.8	98.8
S4		7.0		69.2	69.2	99.7
X4	5.9	6.3	92.9	69.4	69.3	100.0
		5.9				
FKBG	6.5	6.4	101.5	69.3	69.4	99.8
				19.0	19.0	99.9

Notes A and B are given in the appendix.

Table XIV (Cont)

Averages of Mill Quality Data for SEP-OCT, 1989 - 69 LB Kraft Linerboard

Code	Burst PSIG		CD Ring Crush			CD STFI			
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Lb. Cum. Av.	Ind. #B	Cur. Av.	Lb/In. Cum. Av.	Ind. #B
C1	148.0	146.5	100.7	121.0	118.0	94.8	32.0	31.1	102.9
K1	141.0	138.5	96.0				33.4	32.3	107.4
L1		134.5						32.2	
M1		145.0						32.9	
O1	141.0	139.0	96.0	120.0	116.1	94.1			
Q1	141.0	148.8	96.0				32.5	30.8	104.5
U1	149.0	144.2	101.4		124.3			33.0	
V1	178.0	183.0	121.1	144.0	152.8	112.9			
W1	150.0	141.5	102.1				33.4	30.1	107.4
X1	154.0	157.5	104.8	129.0	121.8	101.1			
Y1	144.0	156.8	98.0				32.1	29.8	103.2
E2	156.0	147.2	106.2	124.0	131.8	97.2	30.7	30.9	98.7
G2	152.0	158.3	103.4	115.0	119.2	90.1	31.6	32.1	101.6
L2	139.0	138.2	94.6						
M2	164.0	152.5	111.6				35.0	33.2	112.5
P2	144.0	144.3	98.0	139.0	140.6	108.9			
W2	156.0	152.7	106.2	121.0	122.2	94.8			
Y2	141.0	144.2	96.0	142.0	145.1	111.3			
I3	147.0	149.5	100.0				28.6	28.7	91.9
J3	133.0	134.3	90.5		123.4				
L3	156.0	153.3	106.2	147.0	149.1	115.2			
N3	160.0	148.0	108.9	136.0	130.2	106.6			
U3	144.0			149.4				24.9	
W3	145.0	155.5	98.7	121.0	111.2	94.8			
D4	155.0	147.0	105.5						
E4	138.0	138.3	93.9	112.0	111.5	87.8			
H4	127.0	130.2	86.4	125.0	123.2	98.0			
N4	155.0	151.2	105.5				32.7	32.0	105.1
S4		144.3					28.7	28.7	
X4	137.0	135.8	93.2	127.0	122.9	99.5	30.7	29.0	98.7
FKBG	148.1	146.9	100.8	128.2	127.6	100.5	32.1	31.1	103.1

Note B is given in the appendix.

Table XV

Averages of Mill Quality Data for NDV-DEC, 1989 - 69 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. #A		Ind. #B	Caliper Mil		
	Cur. Av.	Percent Cum. Av.	Cur. Av.	Lb/M Sq Ft Cum. Av.				
C1	6.8	6.9	106.8	69.0	99.5	18.1	18.4	95.3
K1	6.9	6.9	108.4	69.1	99.6	19.2	19.6	101.1
L1		6.5		69.8			18.9	
M1		6.3		69.5			18.9	
O1	6.1	6.0	95.8	70.2	101.1	19.4	19.1	102.1
Q1	5.7	5.6	89.6	69.2	99.8	19.5	18.7	102.7
U1	6.4	6.3	100.6	69.9	100.8	19.4	19.6	102.1
V1	5.8	5.8	91.1	69.9	100.7	19.4	19.0	102.1
W1	7.3	7.1	114.7	68.3	98.4	19.3	18.6	101.6
X1	5.9	6.0	92.7	67.4	97.1	19.1	19.8	100.6
Y1	6.6	6.7	103.7	68.6	98.9	19.4	20.0	102.1
E2	6.8	6.6	106.8	69.2	99.7	18.6	18.5	97.9
G2	6.2	6.4	97.4	69.2	99.7	17.5	17.8	92.1
L2	6.8	6.9	106.8	69.4	100.1	19.7	19.8	103.7
M2	7.4	7.6	116.3	69.3	99.9	19.4	19.1	102.1
P2	5.5	6.4	86.4	69.5	100.1	17.6	18.5	92.7
W2	7.0	7.0	110.0	69.2	99.7	18.2	18.3	95.8
Y2	6.1	6.1	95.8	70.0	100.8	19.8	19.7	104.2
I3	6.1	5.9	95.8	69.2	99.7	18.1	18.1	95.3
J3	6.6	6.4	103.7	68.9	99.3	18.3	19.0	96.3
L3	6.0	5.9	94.3	69.3	99.9	18.0	18.6	94.8
N3	5.7	5.6	89.6	69.5	100.2	19.4	19.6	102.1
W3		5.8		70.7	101.9	19.8	20.1	104.2
D4		6.3		68.9	99.3	19.7	19.0	103.7
E4		5.3		70.9	102.1	20.4	19.8	107.4
H4	6.8	6.4	106.8	68.7	99.0	19.1	19.5	100.6
N4	6.9	6.9	108.4	69.2	99.7	16.7	16.6	87.9
S4		6.3					19.6	
X4	6.4	6.0	100.6	69.3	99.9	18.0	19.3	94.8
FKBG	6.4	6.4	101.0	69.3	99.9	18.9	19.0	99.4

Notes A and B are given in the appendix.

Table XV (Cont)

Averages of Mill Quality Data for NOV-DEC, 1989 - 69 LB Kraft Linerboard

Code	Burst PSIG		CD Ring Crush		CD STFI	
	Cur. Av.	Cum. Av.	Cur. Av.	Ind. #B	Cur. Av.	Ind. #B
C1	146.0	146.3	133.0	118.3	104.1	34.0
K1	144.0	139.0				31.2
L1		133.0				32.4
M1		145.0				33.7
O1	140.0	140.0	116.0	116.9	90.8	32.9
Q1	141.0	147.2				30.9
U1	146.0	144.2		127.5		33.5
V1		182.2		151.3		104.1
W1	148.0	143.0				35.9
X1	154.0	157.2	134.0	122.8	104.8	30.3
Y1	138.0	154.0				114.6
E2	150.0	148.8	124.0	130.3		32.3
G2	151.0	158.2	106.0	119.2	97.0	30.5
L2	140.0	138.3	147.0		82.9	30.8
M2	164.0	155.3	123.0		115.0	32.2
					96.2	34.0
P2	148.0	144.3	144.0	141.5		33.7
W2	156.0	154.0	119.0	122.5	112.7	103.1
Y2	137.0	143.7	140.0	143.0	93.1	
I3	143.0	149.0	124.0	124.5	109.5	29.6
J3	138.0	132.0			97.0	28.8
L3	161.0	154.0	146.0	148.4		
N3	147.0	149.2	136.0	129.5	114.2	
W3	147.0	154.3	129.0	113.8	106.4	24.9
D4	147.0	148.3			100.9	
E4	142.0	138.0	114.0	112.2	89.2	
H4	129.0	129.4	128.0	122.8	100.2	
N4	153.0	152.0				34.6
S4		144.3				32.0
X4	136.0	135.4	126.0	124.3	98.6	28.7
						29.6
FKBG	145.8	147.3	128.8	127.8	100.8	32.5
						31.3
						103.7

Note B is given in the appendix.

Table XVI

Averages of Mill Quality Data for JUL-AUG, 1989 - 90 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis Wt. #A		Caliper	
	Cur. AV.	Cum. AV.	Ind. #B	Cur. AV.	Cur. AV.	Ind. #B
C1	6.7		100.6	90.2	24.2	96.7
L1	7.0		105.2	62.3	17.0	67.9
O1	6.1	5.9	91.6	91.7	25.2	100.6
Q1	5.8	6.0	87.1	89.2	25.0	99.8
U1	5.9	6.4	88.6	92.2	25.5	101.8
X1	8.2	8.4	123.2	88.3	25.4	101.4
Y1		6.8		90.5	26.6	
G2	6.3	6.5	94.6	90.2	23.9	95.5
L2		7.3		90.3	25.9	
M2	7.5	7.5	112.7	90.3	24.2	96.7
P2	6.8	6.8	102.2	90.5	25.1	100.2
I3	5.8	6.0	87.1	90.3	23.8	95.1
J3	6.3	7.1	94.6	89.6	24.8	99.1
L3	6.0	5.8	90.1	90.2	23.5	93.9
N3		5.8		90.5	26.5	
N4	6.9		103.7	90.3	21.8	87.1
FKBG	6.6	6.7	98.6	88.1	23.8	95.1

Notes A and B are given in the appendix.

Table XVI (Cont)

Averages of Mill Quality Data for JUL-AUG, 1989 - 90 LB Kraft Linerboard

Code	Burst PSIG		CD Ring Crush		CD STFI	
	Cur. Av.	Ind. #B	Cur. Av.	Ind. #B	Cur. Av.	Ind. #B
C1	180.0	101.9	164.0	99.0	47.0	114.2
L1	131.0	74.1			29.0	70.5
O1	169.0	95.7	162.0	97.7		
Q1	165.0	93.4			42.6	103.5
U1	189.0	107.0	152.0		42.5 44.2	
X1	194.0	109.8	149.0	89.9		
Y1	172.4				39.0	
G2	178.0	100.7	151.0	91.1	41.7	101.4
L2	173.3					
M2	212.0	120.0			44.0	106.9
P2	160.0	90.6	170.0	102.6		
I3	19.0	10.8				
J3	144.0	81.5	185.0	111.6	39.9	97.0
L3	193.0	109.2	198.0	114.0	40.8	
N3	171.2		167.8			
N4	190.0	107.5			42.6	103.5
FKBG	163.4	92.5	167.1	100.8	41.0	99.6

Note B is given in the appendix.

Table XVII

Averages of Mill Quality Data for SEP-OCT, 1989 - 90 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis		Wt. #A		Caliper		Ind. #B
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Lb/M Sq Ft	Ind. #B	Cur. Av.	Mil Cum. Av.	
C1		6.7		90.2				24.2	
L1	7.0	7.0	105.7	62.4	62.3	69.3	18.0	17.0	72.6
O1	5.9	5.9	89.1	90.6	91.6	100.5	25.8	24.9	104.0
Q1		5.9			90.1			24.0	
U1	6.0	6.3	90.6	91.9	91.7	101.9	24.1	25.2	97.2
X1		8.3							
Y1	8.5	8.3	128.4	88.5	90.3	98.1	25.5	26.3	102.8
G2	6.8	6.8	102.7	89.9	90.4	99.7	26.0	25.9	104.8
L2	6.5	6.5	98.2	90.2	90.3	100.0	22.5	23.5	90.7
M2	6.8	7.3	102.7	90.3	90.4	100.1	25.9	25.8	104.4
	7.4	7.5	111.8	90.3	90.4	100.2	24.4	24.8	98.4
P2		6.8							
I3	6.6	6.8	99.7	90.6	90.5	100.5	24.9	24.7	100.4
J3	5.9	5.9	89.1	90.4	90.3	100.3	23.8	23.8	96.0
L3		7.0		89.6	89.9	99.4	25.4	25.3	102.4
N3	6.0	5.8	90.6	90.1	90.5	100.0	22.4	24.3	90.3
	5.6	5.8	84.6	90.5	90.5	100.4	25.8	26.5	104.0
N4		6.9		90.3	90.3	100.2	21.9	21.8	88.3
FKBG	6.6	6.6	99.8	88.2	90.2	97.9	24.0	24.8	96.9

Notes A and B are given in the appendix.

Table XVII (Cont)

Averages of Mill Quality Data for SEP-OCT, 1989 - 90 LB Kraft Linerboard

Code	Burst PSIG		Ind. #B	CD Ring Crush			CD STFI		
	Cur. Av.	Cum. Av.		Cur. Av.	Lb. Cum. Av.	Ind. #B	Cur. Av.	Lb/In. Cum. Av.	Ind. #B
C1		180.0			164.0			47.0	
L1	123.0	131.0	70.4				26.3	29.0	63.9
O1	168.0	167.5	96.2	139.0	161.3	83.0			
Q1		171.6					46.4	42.7	112.8
U1	193.0	186.7	110.5		152.0			44.2	
X1	192.0	189.0	109.9		142.7		43.1	38.4	104.7
Y1	179.0	173.0	102.5				44.4	41.3	107.9
G2	189.0	181.5	108.2	161.0	154.0	96.1			
L2	174.0	173.8	99.6				43.0	42.2	104.5
M2	208.0	186.3	119.1						
P2	162.0	164.7	92.8	166.0	173.2	99.1			
I3	187.0	162.2	107.1				39.5	40.8	96.0
J3	150.0	151.3	85.9	142.0	180.6	84.8			
L3	189.0	193.5	108.2	188.0	196.5	112.2			
N3	168.0	171.2	96.2	158.0	167.8	94.3			
N4	192.0	190.0	109.9				43.0	42.6	104.5
FKBG	176.7	174.6	101.2	159.0	167.5	94.9	40.8	41.2	99.2

Note B is given in the appendix.

Table XVIII

Averages of Mill Quality Data for NDV-DEC, 1989 - 90 LB Kraft Linerboard

Code	Moisture Content		Adj. Basis		Wt. #A		Caliper		Ind. #B
	Cur. Av.	Cum. Av.	Ind. #B	Cur. Av.	Lb/M Sq Ft	Ind. #B	Cur. Av.	Mill Cum. Av.	
C1		6.7		90.2				24.2	
L1	6.8	7.0	102.7	62.5		69.6	17.5	17.5	71.1
O1	6.2	5.9	93.7	91.5		101.9	25.6	25.1	104.1
Q1	5.9	5.9	89.1	90.3		100.6	25.2	24.0	102.4
U1	6.2	6.2	93.7	91.9		102.4	25.0	24.9	101.6
X1		8.4		90.1				26.2	
V1	6.8	6.8	102.7	91.4		101.8	26.2	25.9	106.5
G2	6.5	6.5	98.2	90.3		100.6	23.1	23.3	93.9
L2	7.4	7.2	111.8	89.8		100.0	25.9	25.8	105.3
M2	7.4	7.5	111.8	90.5		100.8	25.6	24.7	104.1
P2	6.4	6.8	96.7	90.8		101.2	23.2	24.7	94.3
I3	6.3	5.9	95.2	90.2		100.5	23.2	23.8	94.3
J3	6.8	7.0	102.7	89.9		100.1	24.4	25.4	99.2
L3	6.1	5.9	92.2	90.5		100.9	21.6	23.7	87.8
N3	5.8	5.7	87.6	90.5		100.8	26.2	26.5	106.5
N4	6.9	6.9	104.3	90.3		100.6	20.6	21.9	83.7
FKBG	6.5	6.6	98.8	88.6		98.7	23.8	24.6	96.8

Notes A and B are given in the appendix.

Table XVIII (Cont)

Averages of Mill Quality Data for NOV-DEC, 1989 - 90 LB Kraft Linerboard


Code	Burst		Ind. *B	CD Ring Crush		Ind. *B	CD STFI		Ind. *B
	Cur. Av.	PSIG Cum. Av.		Cur. Av.	Lb. Cum. Av.		Cur. Av.	Lb/In. Cum. Av.	
C1		180.0			164.0			47.0	
L1	127.0	127.0	72.6				28.9	27.6	70.2
O1	166.0	168.7	94.9	144.0	156.7	86.5			
Q1	174.0	172.0	99.5				42.4	43.1	103.0
U1	189.0	187.5	108.1		152.0			45.3	
X1		189.2			142.2		43.8	39.2	106.3
Y1	197.0	174.0	112.7					42.1	
G2	179.0	183.0	102.4	144.0	156.0	86.5			
L2	173.0	172.6	99.0	185.0		111.2	40.0	42.3	97.1
M2	196.0	194.3	112.1						
P2	175.0	163.7	100.1	189.0	170.9	113.6	38.9	40.8	94.5
I3	185.0	159.8	105.8						
J3	158.0	150.7	90.4	177.9					
L3	202.0	194.8	115.5	193.0	195.2	116.0			
N3	175.0	169.8	100.1	155.0	164.4	93.1			
N4	194.0	191.0	111.0				45.0	42.8	109.3
FK8G	177.9	174.8	101.7	168.3	166.4	101.2	39.8	41.2	96.7

Note B is given in the appendix.

TABLE XIX
DATA ON CONDITIONING AND TESTING ENVIRONMENTS
JUL-AUG, SEP-OCT, NOV-DEC, 1989


Code	Conditioning Environment				Testing Environment	
	Are Quality Samples Conditioned Before Testing?	Procedure		Are Quality Samples Tested Under Controlled Conditions of Temperature and Humidity?		
		Time	Temp., °F			RH, %
C1	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
E1	NO	--	--	YES: 72 ±2°F;	50 ±2 % RH	
I1	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
K1	YES	7	0	YES: 72 ±2°F;	50 ±5 % RH	
L1	NO	--	--	NO		
M1	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
Q1	YES	10	0	YES: 72 ±2°F;	50 ±2 % RH	
R1	NO	--	--	YES: 70 ±4°F;	50 ±5 % RH	
S1	NO	--	--	NO		
	NO	--	--	YES: 73 ±3°F;	50 ±5 % RH	
U1	NO	--	--	YES: 72 ±3°F;	50 ±2 % RH	
V1	NO	--	--	YES: 73 ±3°F;	50 ±5 % RH	
W1	YES	15	0	YES: 73 ±2°F;	50 ±1 % RH	
X1	NO	--	--	YES: 70 ±2°F;	50 ±2 % RH	
Y1	NO	--	--	YES: 0 ±0°F;	0 ±0 % RH	
D2	NO	--	--	NO		
E2	NO	--	--	NO		
G2	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
I2	NO	--	--	YES: 73 ±4°F;	50 ±2 % RH	
J2	NO	--	--	YES: 72 ±3°F;	50 ±2 % RH	
K2	YES	10	0	YES: 72 ±2°F;	50 ±2 % RH	
L2	NO	--	--	YES: 72 ±5°F;	50 ±5 % RH	
M2	NO	--	--	YES: 0 ±0°F;	0 ±0 % RH	
N2	NO	--	--	YES: 73 ±3°F;	50 ±2 % RH	
P2	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
Q2	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
W2	NO	--	--	NO		
X2	NO	--	--	YES: 72 ±5°F;	50 ±5 % RH	
Y2	NO	--	--	YES: 73 ±4°F;	50 ±2 % RH	
F3	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
I3	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
J3	NO	--	--	NO		
K3	NO	--	--	NO		
L3	NO	--	--	YES: 73 ±3°F;	50 ±2 % RH	
M3	NO	--	--	YES: 72 ±3°F;	50 ±2 % RH	
N3	NO	--	--	YES: 72 ±3°F;	50 ±2 % RH	
U3	NO	--	--	YES: 73 ±4°F;	50 ±2 % RH	
V3	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
W3	NO	--	--	NO		
Y3	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
D4	YES	0	0	YES: 73 ±2°F;	50 ±2 % RH	
E4	NO	--	--	NO		
G4	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
H4	NO	--	--	NO		
J4	NO	--	--	YES: 70 ±2°F;	50 ±2 % RH	
M4	YES	0	0	YES: 73 ±2°F;	50 ±2 % RH	
N4	NO	--	--	NO		
R4	NO	--	--	YES: 70 ±4°F;	50 ±5 % RH	
S4	NO	--	--	YES: 73 ±2°F;	50 ±2 % RH	
W4	NO	--	--	YES: 0 ±0°F;	0 ±0 % RH	
X4	NO	--	--	YES: 72 ±2°F;	50 ±2 % RH	
Y4	NO	--	--	YES: 70 ±4°F;	50 ±5 % RH	

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APPENDIX

NOTES A and B USED IN TABULATIONS OF MILL DATA

Notes A and B used in the tables of mill data are given below; these notes define the procedure used in calculating adjusted basis weight, machine index, and C.K.P.G. index. It should be stressed that each formula is applicable only to a specific physical property of a specific physical property of a specific grade weight of linerboard.

NOTE A: Adjusted basis weight (ABW) = reported weight (RBW) a
adjusted to moisture content of 7.8%:

$$ABW = RBW [(100 - \text{reported moisture content, \%}) / (100 - 7.8)]$$

NOTE B: Machine index (%) =

$$[(\text{current machine average} / \text{cumulative C.K.P.G. average}) * 100]$$

Where Cumulative C.K.P.G. average =

$$[\text{CFKBGA}'A \text{ for previous six periods, excluding current CFKBGA} / 6] \text{ C.K.P.G. index (\%)} =$$

$$[(\text{current C.K.P.G. average} / \text{cumulative C.K.P.G. aveage}) * 100]$$

Where Current C.K.P.G. average =

$$[\text{CMA's for current period for all machines} / \text{number of machines}]$$

CMA = current machine average for a specific physical property of a specific linerboard grade weight obtained during a given period on a specific machine.

CFKBGA = current C.K.P.G. average for a specific physical property of a specific linerboard grade weight obtained during a given period.

